HM Government

Responding to the Climate Change Committee's (CCC) 2023 Annual Progress Report to Parliament

October 2023

HC 1919

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Presented to Parliament pursuant to Section 37 of the Climate Change Act (2008)

Ordered by the House of Commons to be printed 26 October 2023

HC 1919

This publication is available at www.gov.uk/official-documents

Any enquiries regarding this publication should be sent to us at NZhub@beis.gov.uk

ISBN 978-1-5286-4525-6

E03009808 10/23

Printed on paper containing 40% recycled fibre content minimum.

Printed in the UK by HH Global on behalf of the Controller of His Majesty’s Stationery Office

Contents

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Foreword

Our mission is to achieve energy security for this country, powering Britain from Britain, by replacing imported fossil fuels with green renewables and nuclear energy. This will not only help us reach net zero by 2050; it will also underpin our resilience and prosperity as a nation.

We are seeing increasing evidence of how greenhouse gas emissions are changing the global climate. Record-breaking temperatures and wildfires have become the norm in many parts of the world and terrible floods in Libya recently have killed thousands. Global energy markets have also become more volatile after Putin's weaponisation of energy pushed up electricity bills for millions of families.

That is why the UK has established itself as a global leader on tackling climate change. We have overdelivered on every target to cut emissions so far and decarbonised faster than any other major economy. Make no mistake, this Government is committed to seizing the opportunity of a greener future for our green and pleasant land and is confident in meeting our future emissions targets.

We are phasing out coal and powering ahead on renewable energy.

Coal's share of our electricity generation has already declined significantly in recent years – from almost 40% in 2012 to around 2% in 2022. In line with our net zero target, we are phasing out unabated coal-fired power generation by 2024 and all remaining coal fired power stations in Great Britain are scheduled to close before this date.

In quarter one of 2023, 48% of our power came from renewables, up from just 7% in 2010. The UK has built the world's five largest operational offshore wind farms, partly thanks to the funding provided by our world-leading Contracts for Difference scheme. The most recent funding round secured 3.7GW of new low carbon energy from onshore wind, solar, tidal and geothermal sources, with the next round to be held in 2024 and future rounds annually thereafter.

This Government's investments are not only bolstering our energy security for the future, they are also boosting our economy now. Since 2010, the UK has seen £198 billion of investment into low carbon energy, through a mixture of government funding, private investment and levies on consumer bills, and our global leadership is expected

to attract at least a further £100 billion in private investment by 2030. In 2021, there were nearly a quarter of a million people working directly in low carbon businesses across the country, generating a turnover of more than £50 billion – and creating further jobs and growth in supply chains. We will continue to seize the opportunities of net zero to benefit people across the UK. For example, in Teesside SeAH Wind are investing over £400 million to build a new factory, producing steel monopile foundations for offshore wind turbines, creating up to 800 jobs by 2030.

We are reversing the neglect and short-termism of previous governments with our revival of nuclear power. This Government is ensuring the UK is at the forefront of global leadership when it comes to nuclear innovation. £700 million has already been announced to help make the UK a global hub for nuclear fusion, the same reaction that fuels our sun. I recently announced the six companies that have been shortlisted to build the first small modular reactors, which could transform how nuclear power stations are built and result in billions of pounds of investment in the UK. We are continuing to back the existing site at Hinkley Point C, which will provide reliable energy at an affordable cost, powering nearly six million homes for around 60 years and in August, we announced £341 million of investment for Sizewell C, building on the government's existing £870 million stake and helping to ensure we secure the future of the nuclear industry in this country.

This Government also recognises that some industries are harder to decarbonise than others and that not addressing this problem risks cheap, high-polluting imports from abroad undermining products produced here in the UK. That is why the UK emissions trading scheme, a key component of the UK's world-leading carbon pricing regime, is designed to give industries the confidence to decarbonise as efficiently as possible, whilst helping reduce emissions in line with our net zero objectives. Reducing the burden on UK industry, while helping us to achieve our net zero targets.

In light of all this progress, we have to be realistic. The UK economy has historically benefitted from cheap, abundant fossil fuels. The UK still relies on oil and gas and this will continue to be the case over the coming decades, as the CCC itself acknowledges. As the Government takes forward a pragmatic and proportionate response to the path to net zero, a key part of this will be maintaining our domestic oil and gas industry to reduce the need for costly foreign imports, which have higher emissions and leave us at the behest of foreign regimes. Oil and gas assets remain crucial to our national infrastructure, providing more than 200,000 UK jobs in 2021. The jobs and skills from the oil and gas sector will be vital to enabling the growth of new sectors such as Carbon Capture, Usage and Storage (CCUS) and hydrogen. This Government's approach to oil and gas will underpin our energy security and boost the economy.

It is our responsibility to protect the natural environment and leave a legacy of a greener future for generations to come. The Prime Minister's recent speech committed us to a common-sense approach and a more honest debate about how we get to net zero. One that does not prevent people from enjoying things like eating meat, or flying abroad on holiday and does not force the public to make costly changes to their cars or boilers at a time when cost of living pressures are so high.

Our duty is to fight global warming with sensible policies that the British people support, not by imposing extra financial costs on them. That is why we will meet our net zero targets in a pragmatic, proportionate and realistic way that eases the burdens on families.

This Government will ensure the UK maintains its global leadership on tackling climate change, from decarbonising our power system, to protecting our natural environment, to working with our international allies to combat global deforestation.

I thank the CCC for their report on the Government's progress and for their help in ensuring we can have an honest and pragmatic debate on how we get to net zero. I look forward to continuing to work with the CCC and am confident that we will meet our carbon budget targets and achieve net zero by 2050.

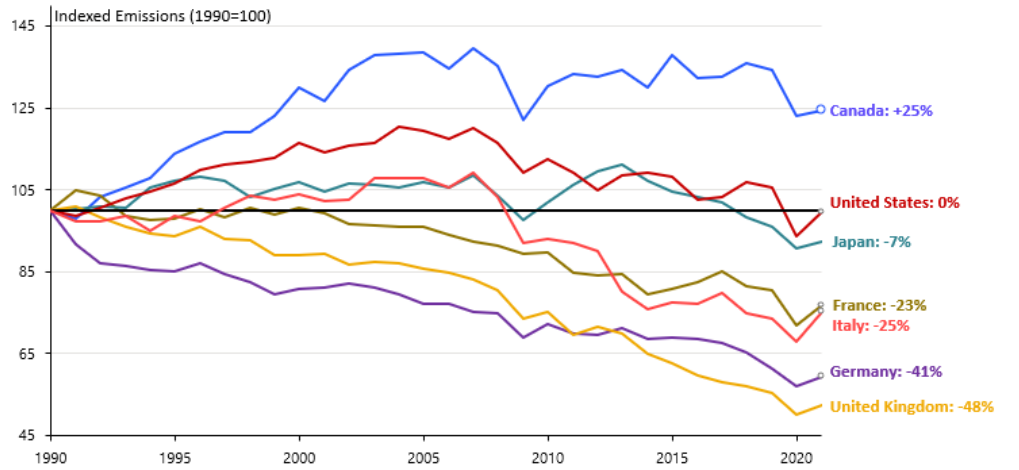
RT HON CLAIRE COUTINHO MP
Secretary of State for Energy Security & Net Zero

1. Introduction

1.1. In 2008, the Government passed the Climate Change Act, setting a target for the year 2050 for the reduction of targeted greenhouse gas emissions, providing a system of carbon budgeting and establishing the Climate Change Committee (CCC). Government values the strength of our legal frameworks and the contribution the CCC makes to the discussion on tackling climate change and reducing our greenhouse gas emissions.

1.2. We have a proud history of raising global climate ambition and leading by example. The UK has one of the most ambitious targets for emissions reductions by 2030 of any major economy and has the fastest reduction in greenhouse gas emissions of any major economy, down almost 50% since 1990 (chart 1).

1.3. **Chart 1: Greenhouse Gas emissions for the UK and major economies, 1990 – 2021**

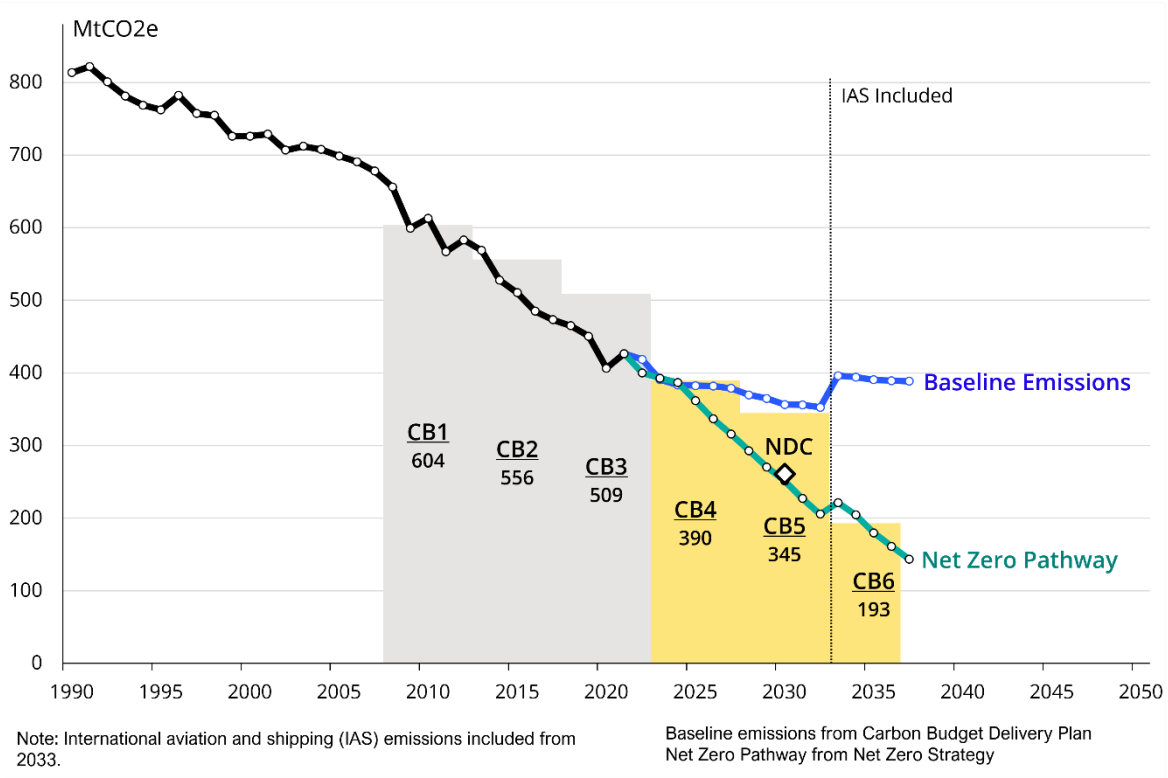


Note: GHG including land use, land-use change and forestry. Figures may differ slightly from official inventory submissions.

UNFCC reported inventory data for non-UK countries UK GHGI data (to exclude Crown Dependencies and Overseas Territories), 2023.

1.4. In March this year, we published unprecedented levels of detail on our plan to deliver energy and climate security in *Powering Up Britain*, which represents a marked shift – from target setting to getting on with delivery. We are proud that the UK has overshot all our carbon budgets to date (chart 2) and the CCC acknowledge in their report that their confidence in the UK meeting the Fourth Carbon Budget (2023-2027) has increased in the last year. The Government acknowledges the challenges of meeting future carbon budgets but is working hard to ensure delivery.

1.5. **Chart 2: Emission Levels Required to Meet our Carbon Budgets**



1.6. We are determined to safeguard our energy independence and power up Britain from Britain as we transition to a greener economy. This Government recognises that investing in low carbon technologies like wind, solar, nuclear and carbon capture – moving faster on these than many other countries – to deliver the energy security is essential for a strong growing economy.

1.7. Earlier this year, the Prime Minister signalled his intent by creating the new Department for Energy Security and Net Zero, with the ambition to enhance the UK's energy security, seize the economic opportunities of the transition, and deliver on net zero commitments.

1.8. More recently in September, the Prime Minister committed to a pragmatic, proportionate, and realistic approach to meeting net zero that eases the burdens on working people whilst maintaining commitment to our world leading, ambitious targets. He made further commitments to accelerate planning for the most nationally significant projects, speed up grid access and support leading scientists to develop green technologies.

1.9. The Department of Energy Security and Net Zero's objectives remain the same:

- **Climate security** – transforming our economy to ensure we reach net zero emissions by 2050.

- **Energy security** – protecting our energy security while setting the UK on a path to greater energy independence and delivering the system transformations necessary to meet current and future demand.
- **Consumer security** – minimising costs of the system for consumers, bringing bills down, and keeping them affordable.
- **Economic security** – seizing the opportunities of our green energy future to create new energy industries and high skilled jobs and boost growth.

1.10. We thank the CCC for their advice and challenge over the last 15 years. In response to the CCC's 2023 report, this document:
- Reiterates the Government's priorities, demonstrating the UK will continue to have one of the most ambitious targets in the G20, cutting emissions by at least 68% by 2030 on 1990 levels;
- Demonstrates the actions we will be taking this year and addresses the CCC's main areas of concern – responding to all of the CCC's recommendations;
- Demonstrates the progress we are making towards net zero against the metrics outlined in the *Net Zero Strategy*.

2. The UK as a global leader on the net zero transition

Delivering on our priorities: Climate security

2.1. Despite only currently contributing 1% of annual global emissions, the UK has been – and will remain – at the centre of global efforts to tackle climate change and transition to a global net zero economy. Between 1990 and 2021, we cut our emissions by 48%, decarbonising faster than any other G7 country whilst growing the economy by 65% (chart 1). The *2030 Strategic Framework for International Climate and Nature Action* sets out an ambitious vision over this critical decade to keep 1.5°C alive by halving global emissions, building resilience to current and future climate impacts, and halting and reversing biodiversity loss.

2.2. Domestically, we will reach our net zero target in a way that protects energy security, supports green growth and innovation, and maximises benefits for businesses and consumers. Globally addressing the challenges of climate change will require an unprecedented level of international action and collaboration.

2.3. We remain committed to keeping 1.5 degrees within reach. We will:
- Spearhead efforts to accelerate decarbonisation in key sectors globally (e.g. power, hydrogen and steel) through the Breakthrough Agenda to reach positive tipping points for clean tech this decade;

- Remain committed to spending £11.6 billion of International Climate Finance between financial years 2021/22 and 2025/26 building on the Prime Minister's recent announcement of the UK's largest ever contribution to international climate through the $2 billion contribution to the Green Climate Fund.
- Remain committed, with other donors, to delivering on the goal to mobilise $100 billion in climate finance this year, and on the commitment to double adaptation finance by 2025. The UK will triple our funding for adaptation from £500 million in 2019 to £1.5 billion in 2025.
- Champion the need for multilateral reform of the global financial system to align with the Paris Agreement and Global Biodiversity Framework, backed up by our role as a leading global hub for green finance, a shareholder of International Financial Institutions and our international climate finance and commitment to have the world's first net zero aligned financial centre.
- Accelerate the phase out of unabated fossil fuels and scale up clean energy globally through targeted support such as Just Energy Transition Partnerships and the Powering Past Coal Alliance, utilising our expertise in wind, solar and grids.
- Champion action on protection and restoration of nature including halting and reversing forest loss by 2030 through initiatives such as the Forest and Climate Leaders Partnership and delivering on the Global Biodiversity Framework, recognising that the climate crisis and biodiversity loss are inextricably linked.
- Help scale up efforts to adapt to climate change, through championing the need to double adaptation finance, establish a clear framework for the Global Goal on Adaptation and ensuring the voices of vulnerable countries are heard.

2.4. Building on the UK's strengths, we continue to show strong leadership in the renewables revolution. Renewable energy is already starting to make up the majority share of our electricity mix, with 48% of our power coming from renewables in quarter one of this year. Solar and wind are currently the cheapest forms of power, and these technologies will continue to play an important role in our energy system. The UK is home to the world's five largest operational offshore wind farm projects.

2.5. Under the UK's COP26 presidency, 90% of the world's GDP committed to net zero, up from 30% when the UK took on the COP Presidency. More than 170 countries have now put forward new 2030 climate plans, known as Nationally Determined Contributions (NDC), amounting to around 6 gigatonnes in emissions reductions.

2.6. The UK rallied 144 partners - covering over 90% of global forests and some 14 million square miles of forests – behind the Glasgow Leaders' Declaration on Forests and Land Use (GLD).

2.7. During COP27, our focus was building on the Glasgow Climate Pact. We welcome the landmark progress made on loss and damage and the agreement to establish a fund to support those most vulnerable to the effects of climate change. We also saw progress on key work programmes launched in Glasgow as well as through our International Climate Finance commitments and our diplomatic networks.

2.8. Looking ahead to COP28, the UK Government will continue to press for urgent action and ambition to keep 1.5 alive and will seek to drive progress through initiatives such as the Breakthrough Agenda and Forest and Climate Leadership Partnership.

2.9. We welcome the progress of other countries on tackling climate change over the last 12 months. The UK remains committed to our Nationally Determined Contribution and playing a leadership role internationally on climate change prevention and building resilience to climate impacts.

Delivering on our priorities: Energy security

2.10. When Putin invaded Ukraine in February 2022, it exposed Europe's over-dependence on Russian gas and put the need for energy security into sharp focus. While Britain has little direct exposure to Russian gas, we face significant indirect impacts through our links to European gas networks and global markets.

2.11. *Powering Up Britain* set out the steps the UK Government is taking to ensure the UK is more energy independent, secure and resilient. Our net zero ambitions go hand in hand with this.

2.12. We will do this by boosting our electricity generation capacity through to the late 2030s and will make use of our domestic production from UK oil and gas as the North Sea basin declines.

2.13. We have already set out ambitious plans to decarbonise the power system by 2035, subject to security of supply. That is why we continue to drive deployment of low carbon infrastructure, for example, we aim to deliver up to 50GW offshore wind by 2050, and up to five times our current solar capacity by 2035.

2.14. Earlier this year, the Chancellor announced up to £20 billion for Carbon Capture, Usage and Storage (CCUS) at the Spring Budget 2023. We launched the £120 million Future Nuclear Enabling Fund and will announce a shortlist of applications soon. We launched Great British Nuclear to progress new nuclear. We also invested approximately £700 million to become a project shareholder in Sizewell C in November 2022, and made a further £511 million of funding

available over summer 2023 to support continued project development and prepare for the start of construction.

2.15. Our Contracts for Difference (CfD) scheme is a UK success story, having contracted more than 30GW of capacity, including 20GW of offshore wind, since 2014. The results of the most recent funding round, known as Allocation Round 5 (AR5), were announced on 8 September. Supported by an annual budget of £227 million, a record 95 renewable electricity projects across Great Britain were successful, at a combined total capacity of 3.7GW – enough to power the equivalent of 2 million homes. We saw significant numbers of onshore wind and solar projects win contracts, nearly four times as many tidal stream projects as the previous auction in 2022 and, for the first time, geothermal projects.

2.16. The UK has a world-class renewables sector, and we must ensure we are taking full advantage of our success and getting the increased supply of homegrown, clean energy to people's homes and businesses. This is why the Government commissioned the Electricity Networks Commissioner, Nick Winser, to advise on accelerating the rollout of electricity transmission infrastructure, which will be crucial to moving electricity generated from renewable sources to the places that need it.

2.17. To unleash the energy from projects waiting to be connected to the grid, which could generate over half of our future electricity needs, the Government is bringing forward comprehensive new reforms to energy infrastructure, including the UK's first ever spatial plan for infrastructure to give industry certainty and communities a say. In addition, planning for the most nationally significant projects will be sped up and there will be reforms to ensure those projects that are ready first, will connect first. The Government will be considering Nick Winser's recommendations published in August closely and will work towards achieving an energy system led by renewables, nuclear and other clean, homegrown technologies.

2.18. We continue to work on removing barriers to supercharge the rollout of low carbon and renewables projects, including streamlining the planning process and connections to the electricity network. This will help us to secure strong private investment in renewables projects creating clean, British energy.

2.19. The UK Emissions Trading Scheme (UK ETS) will also be aligned with our net zero targets starting from January 2024. This will drive climate ambition, smooth the transition while maintaining net zero consistency and support industry to invest in greener energy sources. The UK ETS Authority has also committed to consult on further ambitious design changes, such as measures to maintain its well-functioning and stable market including examining the potential merits of a supply adjustment mechanism.

2.20. Despite the declining role of oil and gas in our energy mix, there will still be a role for oil and gas in our energy system up to 2050 and beyond. Britain will still need to continue to import energy and our own production is key to our export strategy.

2.21. We will continue to work with our friends and allies in securing a flexible and resilient market for exports, and we will build relationships with strong, trusted partners and diversify our supply where we will need to import. We will build resilience into our system to ensure that any disruptions to imports are minimised so that consumers have a reliable supply of energy.

2.22. This Government will not ban new oil and gas in the North Sea. Our oil and gas sector is vital to our economy as we transition to a greener economy. It provides vital engineering skills and high-quality jobs that will be crucial and transferable as we continue the expansion of our offshore wind sector. Oil and gas assets remain crucial to our national infrastructure. In 2021, the sector provided 200,800 UK jobs, which is 22,300 more than in 2020. The jobs in this sector will be vital to enabling the growth of new sectors such as CCUS and hydrogen. The Government will continue to ensure emissions from oil and gas projects are minimised and manage the transition to low carbon forms of energy to ensure the UK's energy security.

Delivering on our priorities: Consumer security

2.23. Despite the UK having very little direct exposure to Russian gas, we have all seen the consequence of Putin's war in our bills. Economies have slowed or contracted, inflation has risen, and household energy bills have soared across much of the western world. A secure, cheap and resilient energy system is vital in reducing these pressures on consumers and businesses. We are taking steps to protect our environment and reduce our emissions, but doing it in a proportionate and pragmatic way.

2.24. As we make the transition to a secure and low carbon electricity system, affordability will remain at the heart of our thinking. Ensuring we are powered by clean, homegrown, and cheap energy is a priority.

2.25. The Government has already spent nearly £40 billion protecting households and businesses from spiralling energy bills over last winter. Additional support is already being delivered through the welfare system via Cost-of-Living payments this year. Vulnerable households will receive a larger £900 Cost-of-Living payment through the welfare system for FY 23/24, up from £650 in FY 22/23, that coincides with the reduction of government energy bills support.

2.26. As set out in the 2022 Autumn Statement, we are exploring the best approach to consumer protection from April 2024, as part of the wider retail market

reforms. Until then, the Energy Price Guarantee (EPG) remains as a safety net, which will provide support should energy prices spike again this coming winter, ensuring typical energy bills are no higher than £3,000. Going forward, the Government welcomes recent reductions to household energy bills, whilst continuing to closely monitor energy prices and keeping energy support schemes under review.

2.27. As part of the transition, we will continue to consider how these schemes evolve to support those who need them most. The Government is committed to working with Ofgem to take steps to make our retail energy markets more resilient, investable, and better for consumers.

2.28. The pathway Government will take to reach net zero will follow a market-led approach, going with the grain of consumer choice to minimise impacts on consumers. Action is being progressed to support the transition, including a new approach to gas and electricity price rebalancing, which we will provide further information on in due course. This will incentivise the move to electrification, reducing over reliance on gas and helping to protect UK energy consumers from the price shocks experienced recently. The Prime Minister also announced in his speech a 50% increase in the Boiler Upgrade Scheme which now offers £7,500 to replace gas boilers with lower emitting alternatives like heat pumps.

Delivering on our priorities: Economic security

2.29. There are huge opportunities in our green energy future to create new industries, jobs, investment and economic growth and the UK is well placed to seize them. McKinsey estimate $1 trillion of value to UK businesses over the period to 2030.

2.30. The UK has demonstrated that green and growth go hand in hand over the last decade and we are determined to build on this. We have delivered the second highest amount of recorded low carbon investment cumulatively across Europe over the last 5 years and estimate that since 2010, the UK has seen £198 billion of investment into low carbon sectors, through a mixture of government funding, private investment and levies on consumer bills. Over 2021 and 2022 alone, it is estimated that £50 billion of new investments have been made in low carbon sectors in the UK. This investment has had an impact across renewables, hydrogen, CCUS, nuclear, sustainable materials, energy storage, electrified transport and clean heat.

2.31. The UK is already home to five of the world's largest operational offshore wind farms and we're improving our auction process to maximise private investment, including by considering whether to introduce Non-Price Factors into the Contracts for Difference Scheme, which could further incentivise supply chain development and increase supply chain security. The Government is also investing in four new clusters to capture and store carbon

from the atmosphere which will help to decarbonise hard to abate sectors and is building new nuclear power stations for the first time in thirty years. Just recently, a significant long-term decision was taken to raise funding for Sizewell C – demonstrating Government action to both provide and secure investment in the low carbon technologies of the future.

2.32. The UK is no longer alone in recognising the economic benefits the transition will bring and we welcome increased global ambition on climate change. The US have taken decisive action through the Inflation Reduction Act and the EU has set out plans to grow green industries through its Green Deal Industrial Plan. Over the last decade, the UK has developed a tremendous record for attracting investment into green industries through a range of financing mechanisms, policy and market frameworks and targeted public investment, and we are determined to build on this. Since 2010, our public and private investment in low carbon energy sectors has been 50% higher than the US as a share of GDP, and that's why 40% of our power came from clean energy sources last year, nearly twice that of the US.

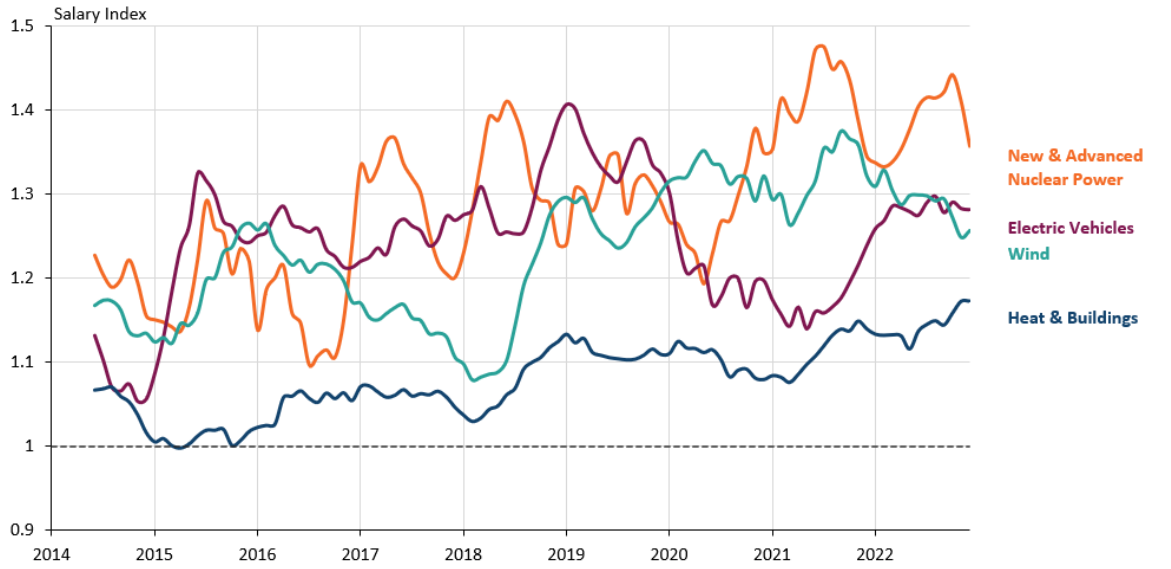
2.33. All economies will need to take decisive steps to reduce global emissions and increased investment in net zero technologies globally will unlock innovation and drive costs down, as well as creating opportunities for UK exports. As a country that currently emits less than 1% of the world's carbon emissions annually, one of the most powerful contributions the UK can make is our unique ability to develop new technologies that can help the world. The Prime Minister recently announced £150 million Green Future Fellowships that will support at least 50 leading scientists and engineers to develop real, breakthrough green technologies, building on the £4.2 billion being invested by Government in net zero research and innovation over the period from 2022-2025 and ensuring the UK maximises its existing world leading strengths in R&D to put innovation at the centre of our strategy to get to net zero.

2.34. The Government is supporting the development and growth of resilient UK supply chains and targeting public funding strategically for key industries - critical to delivering net zero and energy security. Our Floating Offshore Wind Manufacturing Investment Scheme will aim to provide up to £160 million to kick start investment in port infrastructure projects, supporting the growth of wind power manufacturing in the UK. To secure the economic opportunities of the transition to clean heat, £30 million will aim to be provided through the Heat Pump Investment Accelerator, leveraging up to £270 million of private investment into manufacturing and associated supply chains. We will continue to anchor and support the development of those supply chains critical to delivering our net zero and energy security ambitions, while promoting the rules-based international system. We have also published the Critical Minerals Strategy in July 2022, the Critical Minerals Refresh in March 2023 and the Semiconductor Strategy in May 2023.

2.35. The transition will be financed by entrepreneurs, businesses and investors that recognise the huge benefit of investing in the green economy. As we set out in the *2023 Green Finance Strategy*, private investment will provide the bulk of the financial support for the transition, removing the burden on working families by driving down costs. That is why our plans build on our strengths and provide businesses with long-term certainty through our policy and regulatory frameworks to help de-risk and drive investment into net zero sectors.

2.36. The transition to net zero also opens opportunities to create well-paid and high-skilled jobs, support levelling up and reinvigorating our industrial heartlands. It is estimated that over 80,000 green jobs are currently being supported or in the pipeline across the UK economy as a result of new government policies and spending since November 2020. North East and North West England, Yorkshire and the Humber, the Midlands, Scotland, Wales and Northern Ireland will each have unique benefits from the transition.

2.37. **Chart 3: Advertised salary index by net zero sector using Lightcast™ online job advert data, UK, 2014 to 2022. Average salary index by sector (6-monthly rolling average)**



Note: Salary index is the monthly average salary of job adverts for select net zero sectors relative to the monthly average salary for all UK online job adverts.

DESNZ's experimental analysis of Lightcast online job advertisement data, 2023.

2.38. The ONS estimate a 16% increase in direct employment in low carbon businesses across the economy from 2020 to 2021. Separately, analysis of green jobs advertisements by the Department for Energy Security and Net Zero suggests that within some parts of the green economy, jobs advertised offer higher salaries compared to the UK average.

3. Achievements and progress since March

3.1. Since *Powering Up Britain* was published in March of this year, the Government has been delivering on commitments and ensuring it meets its objectives. Since March, the Government has:

Table 1:
Achievements and progress since March

DATE	What we did
March	• **Published Powering Up Britain:** setting out how the Government will enhance our country's energy security, seize the economic opportunities of the transition, and deliver on our net zero commitments. • **Published the Research & Innovation Framework Delivery Plan**: to outline the Government's £4.2 billion investment in net zero R&D programmes for the current Spending Review period 2022-25 and how these are aligned to the priorities in the Framework. • **Published 2023 Green Finance Strategy**: setting out how the UK will maintain its leading position at the forefront of the global green finance market and provide the financing needed for our energy security, net zero and environmental targets.
April	• **Delivered more bill discounts for energy and trade intensive sectors:** Opened applications to energy and trade intensive sectors most affected by the unprecedented rise in global energy prices to claim further discounts on their bills between 1 April 2023 and 31 March 2024.
May	• **Opened applications for the £40 million biodiversity research programme**: Helping projects around the world put the power of biodiversity at the forefront of our fight against climate change and poverty. • **Convened the first Net Zero Council meeting:** Working with business, industry, investors and finance leaders to identify and secure existing and future economic opportunities for the UK and support delivery of our net zero target. • **Issued a call for evidence relating to the near elimination of biodegradable waste to landfill.** Government is committed to achieving the near elimination of biodegradable municipal waste to landfill from 2028. This call for evidence will support the exploration of policies to achieve this commitment. • **Reported progress on the £1 billion Net Zero Innovation Portfolio and £385 million Advanced Nuclear Fund for 2021:** This investment aims to accelerate the commercialisation of ten priority green technologies and has so far created nearly 4,000 jobs, spent 80% of

	funding outside of London and the South East and attracted £345 million of matched funding.
June	• **Secured funding for Fusion Energy:** Seven organisations secured contracts with the United Kingdom Atomic Energy Authority (UKAEA) to develop their innovative solutions and technologies to the 'proof of concept' stage worth £6.8 million in total. • **Received the Lowland Agricultural Peat Task Force Chair's Report:** In the Government Response we committed to taking forward action on all 14 recommendations, to ensure lowland peat soils can be managed more responsibly.
July	• **Delivered an uplift to Contracts for Difference (CfDs):** At Energy Security Week the Government announced a £22 million uplift for flagship CfD renewables scheme and announced new powers to protect UK energy supplies. • **Launched Great British Nuclear:** Supporting the UK Government's ambition to provide up to a quarter of the UK's electricity from homegrown nuclear energy by 2050 and achieve among the cheapest wholesale electricity prices in Europe, whilst supporting jobs across the country. • **Confirmed a further £170 million investment of previously allocated funding for Sizewell C:** Subject to final approvals, the project will boost UK energy security, as well as reduce dependence on volatile fossil fuel imports and deliver government priority to grow the economy. • **Published the third National Adaption Programme:** Setting out a strategic five-year plan to boost resilience and protect people, homes, businesses and our cultural heritage against climate change risks such as flooding, drought and heatwaves. • **Secured one of the largest ever investments in the UK auto industry, supporting the creation of thousands of jobs and over £4 billion in UK gigafactory investment:** Tata Group announced that it will invest over £4 billion in a new UK gigafactory which will create thousands of jobs. • **Enabling industrial electrification call for evidence launched:** Seeking evidence to understand how to enable industry to switch away from fossil fuels to electricity. • **Announced tighter limits on industrial, power and aviation emissions:** The UK Emissions Trading Scheme (UK ETS) Authority responded to the consultation it held in Spring 2022 on the development of the scheme. The response confirmed the ETS cap would be tightened to align with net zero from 2024, there would be no reductions to industry free allocations before 2026 and that free allowances for domestic aviation would be phased out in 2026, and the scheme would be expanded to cover emissions from domestic maritime and energy from waste from 2026 and 2028 respectively. • **Announced further plans for Greenhouse Gas Removals:** Confirmed that the UK Emissions Trading Scheme (UK ETS) is an appropriate long-term market for GGRs. The UK ETS may also be an appropriate market

	for high quality nature-based GGRs, subject to further work to consider permanence, costs, and wider land management impacts. • **Recycling consultation response:** Published Simpler Recycling consultation response (formerly known as Consistency in Recycling). This policy will make recycling easier and ensure there is a comprehensive, consistent service across England.
August	• **Published the Biomass Strategy:** Setting out the role sustainable biomass can play in reaching net zero, what government is doing to enable that objective, and where further action is needed. • **Published the Low Carbon Hydrogen Agreement, the contract which underpins the Hydrogen Production Business Model:** Enabling us to announce successful projects that will be awarded the first contracts for electrolytic hydrogen production in 2023, supporting our ambition of up to 10GW of low carbon hydrogen production capacity by 2030. • **Launched the revamped UK Business Climate Hub and sector roadmap framework and released Net Zero business sector roadmap guidelines:** o Relaunched the UK Business Climate Hub, providing up to date, practical and tailored advice for businesses to reduce emissions. o Published a robust, credible and consistent set of criteria that all business sector roadmaps should meet to ensure they can effectively reduce emissions. This framework will support the creation of tailored action plans for different sectors to decarbonise. • **Provided funding for peatland restoration:** Announced a further £16 million of government funding for an additional twelve peatland restoration projects as part of the Nature for Climate Peatland Grant scheme. • **Made a further £341 million of funding available to the Sizewell C project:** To continue supporting the project's development towards a Final Investment Decision this Parliament.
September	• **Increased the amount available from the Boiler Upgrade Scheme:** Increasing cash grants to replace boilers by 50% to £7,500. • **Announced $2 billion for the Green Climate Fund:** The single biggest commitment of its kind the UK has ever made. • **Announced a £160 million international climate finance package:** Targeting the acceleration of clean tech solutions in developing countries. • **Green Future Fellowship:** Announcing £150 million to support at least 50 leading scientists and engineers to develop real, breakthrough green technologies. • **Started a pre-qualification process for potential investors to invest in the Sizewell C project:** Launching the first stage of an equity raise process for the project. • **Launched the Great British Insulation Scheme:** Providing £1 billion to ensure families in lower council tax bands with less energy-efficient homes will be offered vital upgrades - such as roof, loft or cavity wall insulation - which could cut their annual energy bill by an average of between £300 to £400. This also announced a further £80 million to

	insulate thousands of social homes, saving families on average £240 each year. • **Set out the path to zero emissions vehicles by 2035:** Meaning the UK will have the most ambitious regulatory framework for the switch to electric vehicles (EVs) in the world. This requires 80% of new cars and 70% of new vans sold in Great Britain to be zero emission by 2030, increasing to 100% by 2035.
October	• **Published Simpler Recycling consultation response:** (formerly known as Consistency in Recycling). This policy will make recycling easier and ensure there is a comprehensive, consistent service across England.

4. Taking Further Action

4.1. We are taking action to continue to drive the transition. The Government is currently delivering an ambitious package to drive towards our existing carbon budgets and NDC whilst preparing to receive advice from the CCC on Carbon Budget 7.

4.2. This includes addressing the CCC's recommendations – many of which are in train. Government is partly or fully acting upon 85% of the CCC's priority recommendations and is acting on the majority of the remaining 273 recommendations - demonstrating our commitment to seizing the economic opportunities presented from the energy transition and net zero and the value of the CCC's advice. Table 2 below demonstrates the action we are taking on the CCC's recommendations across all areas of our *Net Zero Strategy*.

4.3. That being said, this Government is determined to get the consent of the public to ensure net zero is achieved. As the Prime Minister set out in his speech on 20 September, we will take a pragmatic, proportional and realistic approach to net zero. That means not taking forward CCC recommendations on policies that force families to make costly and burdensome changes to their lifestyles. For example, we are anti-aviation emissions, not flying, and want to deliver sustainable flying for everyone to enjoy holidays, visit friends and family overseas and to travel for business.

4.4. The full list of the CCC's recommendations and the Government's response can be found in Annex A at the end of this document.

Table 2

Future Government Action

Crosscutting

- **Rebalancing:** we are committed to developing our approach to rebalancing the cost of gas and electricity prices. We should make significant progress affecting relative prices by the end of 2024 and will provide further information in the coming year.
- **Public engagement:** we are committed to going further, and working with trusted messengers and stakeholders to increase and amplify net zero communication and action through a Public Engagement Framework and a Net Zero Roadmap and exploring options to develop a net zero digital platform.
- **Net Zero Skills:** The Green Jobs Delivery Group will deliver and publish a Net Zero and Nature Workforce Action Plan (the Action Plan) by Summer 2024
- **Emissions Trading Scheme:** The UK ETS Authority confirmed the UK ETS cap will be aligned to Net Zero from 2024 going forwards and Government have committed to work with them to set out a long-term pathway for the UK ETS beyond 2030 by the end of 2023. Subject to agreement within the Authority, this pathway will confirm that we will explore expanding the scheme to more sectors of the economy, including high emitting sectors, and that we intend to legislate to continue the UK ETS beyond 2030 until at least 2050.

Heat and Buildings	Power	Transport	Fuel Supply and Hydrogen
• **Boiler Upgrade Scheme:** to be increased by 50% to £7,500. We are spending £6.6 billion this Parliament and a further £6 billion to 2028 on making buildings cleaner and warmer. That is in addition to the £5 billion that will be delivered through the Energy Company Obligation (ECO4) and the Great British	• **Decarbonising the power system:** The Department for Energy Security and Net Zero recognises the value of a short overarching plan that sets out how the various policies to decarbonise power form a coherent whole. We are implementing a 'whole system' approach to overseeing delivery of the Government's ambitions for the power sector and will use analytical and	• **ZEV mandate:** We are committed to phasing out the sale of new non-zero emission vehicles by 2035. Following three consultations on a proposed Zero Emission Vehicle (ZEV) mandate, we have confirmed our final proposals in our government response on 28 September, jointly agreed with Devolved Administrations. Regulations will be laid in UK, Scottish and	• **Coal:** We are phasing coal out of our electricity production by 2024. • **Oil and Gas:** We have ambitious decarbonisation targets in the North Sea Transition Deal to reduce emissions from operations to 50% of 2018 levels by 2030, ultimately ensuring that the UK Continental Shelf reaches net zero by 2050.

Insulation Scheme up to March 2026. • **Clean Heat Market Mechanism:** The Government is proceeding with legislation through the present Energy Security Bill. Draft scheme regulations are in development and will be introduced to Parliament in due course, ahead of the scheme's launch in 2024. • **Energy efficiency:** Building on plans outlined in Powering Up Britain, the government will publish the evaluation of the Boosting access for SMEs to Energy Efficiency competition (BASEE) later this year. • **EPC ratings:** The Government is currently working on proposals for improving the reliability, accuracy and accessibility of EPCs through the EPC Action Plan, and intends to consult on reforms to the Energy Performance of Buildings regime this year.	portfolio management techniques to consider potential options, measure uncertainty and manage the risks, issues, assumptions and interdependencies. • **Planning and grid connection:** Government is working to accelerate the delivery of electricity network connections. This includes working with DLUHC who published proposed reforms to the NSIP process in February 2023 and consulted on them this summer and responding to Nick Winser's report with an Action Plan published in 2023. Furthermore, the Government will shortly publish a connections action plan jointly with Ofgem, building on the industry-led work, to provide direction on further actions. • **Review of Electricity Market Arrangements (REMA):** Government continues to work at pace to deliver. We aim to publish our second REMA consultation in Autumn 2023. This will set out a direction of travel, next steps and support a smooth transition to any new arrangements over time, so that the market can continue	Welsh Parliaments in the Autumn, requiring vehicle manufacturers to ensure an increasing percentage of new cars and vans sold in Great Britain to be to be ZEVs from 2024. • **Airport expansion:** The Government has always been clear that the expansion of any airport must meet our climate change obligations. Any planning application submitted by an airport will be judged by the relevant planning authority, taking careful account of all relevant considerations, including environmental impacts and proposed mitigations. We will review our *Jet Zero Strategy* every five years to ensure the aviation sector is on track to achieve net zero by 2050, and, if appropriate, we will consider reviewing our policy frameworks for airport planning to ensure they remain compatible with achieving our net zero target. • **Sustainable Aviation Fuel (SAF):** The Government has previously committed to have the SAF mandate legislation in place by 2025 and we are on	• **Hydrogen:** We are working at pace to finalise funding mechanisms and allocate funding to support our up to 10GW hydrogen production capacity ambition. We aim to provide further strategic direction on hydrogen production, transport and storage by publishing a production roadmap and 'hydrogen networks pathway' by the end of 2023. Government has taken on board previous stakeholder feedback about accelerating development of business models and has already introduced provisions in the Energy Bill intended to support the design of these new business models by 2025.

	to support investment at pace, improved consumer outcomes, and a decarbonised electricity system (subject to security of supply) by 2035.	track to deliver this. The government will confirm its final sustainability criteria in the government response to the second SAF mandate consultation by the end of 2023. • **Maritime:** The Clean Maritime Plan will be published by the end of 2023. Included in the Clean Maritime Plan will be a trajectory to net zero by 2050, along with interim goals to meet prior to 2050.	
International	**Industry**	**Natural resources**	**Greenhouse gas removals**
• **COP28:** We are committed to driving forward international action to keep 1.5 within reach, building on our COP26 presidency. We will lay a Written Ministerial Statement in advance of COP28 outlining the UK's priorities for the summit and for the conclusion of the Global Stocktake. The Prime Minister has confirmed he will attend, joined by the Minister of State for Energy and Climate who will be	• **Fuel switching:** Policy decisions will be developed following the Call for Evidence on fuel switching to electricity which will run until October. • **Industrial decarbonisation:** In March 2021 government awarded £171 million pounds of the Industrial Decarbonisation Challenge (IDC) to nine projects located in the 5 industrial clusters These projects are in progress and on track to complete in 2024. • **Carbon capture:** We intend to publish an updated version of	• **Tree planting:** Overall, tree planting and woodland creation rates in England have increased by nearly 40% since last year. We know there is more to do and will continue to work with partners at pace to increase the nation's tree cover and boost the forestry sector. • **Land use:** We will publish a Land Use Framework for England in 2023, which will help to inform how we strike the right balance between different land uses.	• **GGR Business Models:** In the Net Zero Strategy, we committed to developing GGR technologies at scale. Business model support will be crucial to overcome immediate barriers to deployment. We consulted at the end of 2022 and responded in June this year confirming we are minded to progress work on a GGR business model based on a 'contract for difference' structure to enable a portfolio of GGR technologies to deploy at commercial scale in the UK

ministerial head of delegation, and the Foreign Secretary. • **International Climate Finance:** We continue to balance our International Climate Finance (ICF) between support for mitigation and adaptation, as detailed in the ICF3 Strategy, published in March 2023. At COP27 the Prime Minister announced a tripling of UK support for adaptation from £500 million in 2019 to £1.5 billion in 2025. • **International representation:** The UK continues to play a leading role on climate change. Net zero remains a priority for the Government and a core objective of the new Department for Energy Security and Net Zero. Graham Stuart as Minister for Energy and Climate will be Ministerial Head of Delegation at COP28. The UK also has an extensive overseas network of ambassadors, high commissioners and climate attaches working closely with international partners on climate ambitions.	the Industrial Carbon Capture (ICC) and Waste ICC Contracts later this year. **Waste and F-gases** • **Government will publish a Waste Sector Decarbonisation plan in due course:** We are also pushing ahead with our Collection and Packaging reforms – timelines for implementation of Simpler Recycling have been set out in the government response to the consultation, published October 2023. Extended Producer Responsibility payments will be implemented from 2025/26 and the Deposit Return Scheme will go live from 2025. • **Fluorinated gases:** UK, Scottish and Welsh Governments are reviewing the F-gas Regulation. This is being done in two stages. The first stage was completed in December 2022 with the publication of an assessment report. The report looks primarily at the impact of the current regulation and current	• **Lowland Peat Taskforce**: We have responded to the Chair's Report, agreeing with its conclusion. We intend to take forward action on all the recommendations, including, where relevant, investing in research and undertaking further policy analysis to consider appropriate next steps. • **Agriculture:** We have ambitious agricultural decarbonisation policies and proposals that we are committed to delivering. In England, this includes a plan to increase the uptake of safe and effective methane supressing feed products when they enter the market. We will also support farmers to understand their emission sources through carbon audits to enable them to take action to decarbonise their businesses.	this decade subject to affordability and value for money. We also intend to include engineered GGRs in the UK ETS, subject to further consultation, a robust MRV regime being in place, and management of wider impacts. • **Bio Energy and Carbon Capture & Storage (BECCS):** We are continuing to develop the power bioenergy carbon capture and storage (power BECCS) business model to incentivise deployment of BECCS within the UK. We remain committed to our ambition to deploy at least 5MTCO2/yr of engineered removals by 2030 and further development of CCUS through the Track-2 process which will establish 2 new clusters. We will also launch a process later this year to begin further expansion of the Track-1 clusters, beyond the initial deployment, identifying and selecting projects to fill the available storage and network capacity anticipated to be available in and around 2030.

	market circumstances. The second stage will involve launch of a public consultation on future policy proposals which will seek to identify F-gas measures that will help meet the UK's net zero target		

5. Conclusion

5.1. The Government is working towards meeting its future carbon budget targets and ensuring the realisation of the net zero by 2050 target. We have successfully overshot all of our carbon budget targets to date, and the actions above show how we are working towards delivery of Carbon Budget 4, 5 & 6 and our 2030 NDC. We thank the CCC for their expert advice and look forward to continuing to work together to progress delivery.

Updates from the Devolved Administrations

Northern Irish Executive

- **Consultation launched on the 2030 and 2040 emissions reduction targets and the level of the first three carbon budgets.**
- **Published the Energy Strategy Action Plan 2023.**
- **Published the 10X Delivery Plan 2023/24.**

Work continues to progress on delivery of the legislative requirements arising out of the Climate Change Act (Northern Ireland) 2022. This includes the launch of a 16-week consultation on 21 June 2023 regarding NI's 2030 and 2040 emissions reductions targets, and the levels of its first three carbon budgets. The outcome of this consultation will also support and help inform the ongoing work on the development of NIs first five-year Climate Action Plan which will be key to driving forward future climate action.

The Department for the Economy (DfE) published its '10X Delivery Plan' on 6 July 2023. The plan sets out the actions to be taken to ensure the achievement of the 11 objectives for 2030 contained within the '10x Economy: An Economic Vision'. The Delivery Plan includes objectives within innovation, inclusive growth and sustainability. DfE also recently published the 'Energy Strategy Action Plan 2023' and launched a connected £3 million Geothermal demonstrator project in June 2023. Other actions include the delivery of an upscaled Energy and Resource Efficiency programme through Invest NI and building on the early successes of a Central Government 'Energy Invest to Save Fund'. There are also several consultations relating to Low Carbon Heat, Energy Efficiency and Biomethane planned for the year ahead.

The following consultations have also been taken forward during 2023:

- Design considerations for a Renewable Electricity Support Scheme for NI. The scheme will be a key step to achieving the 80% renewable energy target by 2030.
- The Circular Economy Strategy for NI. The draft strategy shares the same priorities as the 10x Economic Vision, to create an innovative, inclusive and sustainable economy, with responsible production and consumption at its core.
- Climate Change Reporting by specified Public Bodies – Developing new Regulations. The extended consultation has now closed and work is underway to analyse the responses received to help inform the development of regulations which will enable a fit-for purpose climate change reporting regime for specified public bodies in NI.
- Review of Regional Strategic Planning Policy on Renewable and Low Carbon Energy. The review aims to ensure regional strategic planning policy remains fit for purpose and up to date in order to inform decision-making in relation to development proposals. It will also inform the local development plan process and enable plan-makers to bring forward appropriate local policies.
- Review of energy efficiency requirements and related areas of Building Regulations. The review aligns with The Executive's Energy Strategy – Path to Net Zero Energy which was published in 2021.

Milestones for the next 12 months:

- Set in regulation Northern Ireland's first three carbon budgets and 2030 / 2040 targets.
- Publish Northern Ireland's first five-year Climate Action Plan.
- Develop regulations to establish a Just Transition Commission.
- Develop regulations to establish a Northern Ireland Climate Commissioner.
- Bring forward regulations for specified Public Body climate change reporting.
- Finalise the draft Circular Economy Strategy (pending Executive sign off).

Welsh Government

- **Published the Roads Review and National Transport Delivery Plan, raising the bar for new roads being the right response to transport problems.**
- **Wales is now aiming for the equivalent of 100% of its annual electricity consumption to be generated from renewable sources by 2035.**
- **Published a public engagement strategy: Climate Action Wales.**
- **Passed a new Agriculture Bill.**

Since March, the Welsh Government has continued to focus on delivering Net Zero Wales whilst developing evidence to underpin the plan for Carbon Budget 3 (2026-2030), which will be published in 2026.

The Senedd passed the Agriculture (Wales) Bill, which provides support and regulatory mechanisms to enable and encourage Welsh farmers to sustainably produce goods. The aim is for farms to have a very low carbon footprint, enhanced ecosystem resilience including increased biodiversity, and minimised nutrient losses to air and water.

In line with the Welsh Government's commitment to ensure a just transition to net zero, the newest iteration of the Warm Homes Programme will continue to focus on supporting the worst-off households in the poorest condition buildings in the owner-occupied and private-rented sectors. The new iteration of the scheme will promote a shift away from fossil-fuelled heating, in line with the Welsh Government's Heat Strategy, which was published for consultation in autumn 2023.

Wales is now aiming for the equivalent of 100% of its annual electricity consumption to be generated from renewable sources by 2035, and for at least 1.5 GW of renewable energy capacity to be locally owned. The Welsh Government launched Ynni Cymru, a publicly-owned energy company to expand community-owned renewable energy generation, and the Tidal Lagoon Challenge, a £750,000 fund to support research into addressing the barriers to, and benefits of, tidal lagoon development.

The Welsh Government published Climate Action Wales. This public engagement strategy sets out a framework and guiding principles for how the Welsh Government and its partners will engage people in decision-making about tackling climate change and in the actions necessary to reduce emissions.

The hard work is paying off. The latest greenhouse gas emissions data for Wales shows that 2021 emissions were 36.3 million tonnes of carbon dioxide equivalent (CO_2e), a fall of 35% compared to base year emissions and an increase of 7% compared to 2020. Despite the increase between 2020 and 2021, Welsh emissions in 2021 were 6% below the 2019 pre-pandemic levels.

The CCC published a progress report on reducing emissions in Wales that contained recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.

Milestones for the next 12 months:

- *Heat strategy*
- *New Welsh Housing Quality Standard*
- *Final consultation on Sustainable Farming Scheme*
- *Implementation of net zero cap in the UK Emissions Trading Scheme*
- *Launch of Trydan Gwyrdd Cymru, Wales's state-owned renewable energy developer*
- *National energy plan.*

Scottish Government

- **Published the 2021 Greenhouse Gas (GHG) [1]emissions reduction target by 1.1% in June 2023**
- **Published the 3rd Annual Monitoring Reports [2]on the current, updated Climate Change Plan inMay 2023.**
- **Published Scotland's response to the Climate Change Committee Annual Progress report[3] in June 2023.**

In the last year the Scottish Government (SG) has laid out the following plans to drive delivery, additional to the 2020 update to the Climate Change Plan which contained over 200 policies and proposals:

Introduced the Circular Economy Bill[4] on 13 June 2023. The Bill will establish the 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.

Published its Vision for Scotland's Public Electric Vehicle Charging Network[5]. It comes as a new study shows that uptake of electric vehicles in Scotland could be up to 16% higher than UK Government statistics suggest.

[1] Scottish Greenhouse Gas Statistics 2021
[2] Climate change monitoring report 2023
[3] Climate Change Committee's (CCC) annual progress report 2022 recommendations: SG response
[4] Circular Economy (Scotland) Bill – Bills (proposed laws) – Scottish Parliament | Scottish Parliament Website
[5] Vision for world class public electric vehicle charging network | Transport Scotland

Published the draft Energy Strategy and Just Transition Plan for consultation in January 2023. This sets out a vision for a future net zero energy system and includes 150 actions, as well as consulting on further actions, to help maximise a just transition to net zero.

Published three Just Transition discussion papers on the Built Environment and Construction[6]; Land Use and Agriculture[7]; and Transport[8].

Published the second edition of the Agricultural Reform Route Map[9] setting out what changes recipients of current farm payments will be expected to make from 2025 and beyond.

The latest Scottish GHG emissions data, published in June 2023 shows that Scotland's statutory 2021 emissions reduction target for a 51.1% reduction from the 1990 baseline was narrowly missed by 1MtCO2e; on the statutory basis for measuring progress to targets (the 'GHG Account') emissions are down by 49.9%. From the Annual Climate Change Plan Monitoring reports out of 43 indicators 21 indicators were assessed as on track, 13 as too early to say and 9 as off track.

Milestones for the next 12 months:

- *Publish the final Route Map setting out the detail of how to reduce car kilometre usage by 20% by 2030.*
- *Aiming to lay a draft of the next full Climate Change Plan, setting out emissions reduction policies to reach Scotland's statutory targets up to 2040.*
- *Publish draft sectoral Just Transition Plans (on Built Environment and Construction, Land Use and Agriculture, and Transport) for consultation.*
- *Publish the 4th Annual Monitoring Report and set out Scotland's performance on the annual emissions reduction target for 2022.*
- *The Scottish Government will publish and start implementation of the Energy Strategy and Just Transition Plan.*

[6] Just transition for the built environment and construction sector: a discussion paper - gov.scot (www.gov.scot)
[7] Wider socio-economic context - Just transition in land use and agriculture: a discussion paper - gov.scot (www.gov.scot)
[8] Just transition for the transport sector: a discussion paper - gov.scot (www.gov.scot)
[9] `Agricultural Reform Route Map

Annex A: Responses to the CCC's priority and non-priority recommendations

#	Recommendation	Response
Priority R2022-072	Finalise and ensure the timely implementation of plans to prohibit fossil fuel boiler replacements in off-gas grid buildings from 2026 (2024 for large non-residential buildings). Confirm the proposed regulatory mechanism for phasing out fossil fuel boilers, and clarify whether the required powers are devolved or reserved. **Primary responsibility**: DESNZ	As the Prime Minister set out in a speech on net zero on 20 September, we aim to phase out new and replacement installations of fossil fuel heating systems, for all households, including off the gas grid in England, from 2035, where it is clear a heat pump or alternative low carbon heating technology will work effectively. This will allow sufficient time for the transition, and ensure households will not need to make major energy efficiency upgrades (such as expensive solid wall insulation) in order to comply with the policy. To help people with the transition, the Prime Minister also announced grants available through the Boiler Upgrade Scheme, which gives people cash grants to replace their boiler, will be increased by 50% to £7,500, one of the most generous schemes of its kind in Europe. We are proposing to include an exemption for the estimated 20% of properties where there is currently not a suitable low carbon heating solution. We will work with industry to develop detailed guidance on how households and installers should determine whether their property is suitable for a heat pump or other low carbon heating technology. We would expect this guidance to consider factors such as heat loss, potential to upgrade energy efficiency, if necessary, availability of appropriate space, and any legal constraints. We will explore the potential low carbon heating options for properties that might not be suitable for heat pumps including by issuing a consultation in relation to off gas grid properties next year, in line with commitments the Government has made during Parliamentary debates on the Energy Bill.

#	Recommendation	Response
Priority R2022-073	Respond to the 2020 consultation by finalising and implementing plans to require privately rented homes in England and Wales to reach EPC C by 2028 (as the Government committed to in autumn 2021). **Primary responsibility**: DESNZ	Since April 2020, privately rented homes in England and Wales are required to meet the minimum standard of Energy Performance Certificate (EPC) Band E before they can be let, unless a valid exemption applies. The Prime Minister announced in his speech on 20 September 2023 that the Government will not be requiring landlords to improve the energy efficiency of their property to higher standards than those currently required by legislation. We have already improved the proportion of homes at EPC C to 47% from 14% in 2010 and should take a pragmatic approach to further progress. However, the Government continues to encourage households to improve the energy efficiency of their homes where they can. £6 billion of new Government funding will be made available from 2025 to 2028 in addition to the £6.6 billion allocated in this Parliament to energy efficiency and clean heat in buildings. This provides long-term funding certainty, supporting the growth of supply chains, and ensuring we can scale up our delivery over time. That is in addition to the £5 billion that will be delivered through the Energy Company Obligation (ECO4) and the Great British Insulation Scheme up to March 2026. We have supported households with up to half their energy costs last winter and continue to support the most vulnerable through the Warm Home Discount, which is £150 to 3 million households.
Priority R2022-119	Develop and begin to implement alternative options to address the range of risks to meeting the NDC and carbon budgets. These should broaden the set of emissions reductions pursued, in particular by implementing policies aiming to empower the public to make green choices and stating clearly how they will	The Government has set out its plans for enabling carbon budgets 4-6 to be met in the *Carbon Budget Delivery Plan* - these proposals and policies will also support the UK in meeting its 2030 Nationally Determined Contribution (NDC). We have robust mechanisms in place to monitor, manage and mitigate our delivery risks within this package. This is in

#	Recommendation	Response
	contribute to emissions reduction. The timeline for implementing the plans should consider the time it takes policies to take effect. **Primary responsibility**: DESNZ	addition to regular reporting and to ensure timely action is taken to keep programmes and policies on track. The Climate Change Act already provides a framework to ensuring DESNZ Secretary of State has adequate plans for meeting carbon budgets.
Priority R2022-128	Publish an evidence-based Action Plan for Net Zero Skills that includes a comprehensive assessment of when, where, and in which sectors there will be skills gaps specific to Net Zero. This should include consideration of particular barriers to inclusive and accessible labour market entry into occupations needed for the transition and Government plans for action on the skills system to facilitate entry into these occupations. **Primary responsibility**: DESNZ	The Green Jobs Delivery Group (the Delivery Group) is focused on delivering a *Green Jobs Plan* (the Action Plan) to be published by Summer 2024. This will help to provide the skilled workforce needed to deliver against our legal targets set out by the Climate Change Act (2008) and the Environment Act. The Delivery Group is co-chaired by the Minister of State in the Department for Energy Security and Net Zero, and includes ministers from the Department for Environment, Food and Rural Affairs, the Department for Education, the Department for Work and Pensions, and His Majesty's Treasury. The Action Plan will be informed by sectoral workforce assessments undertaken by industry-led task and finish groups to gather evidence on workforce demand and potential shortages and skills gaps related to net zero and wider environmental goals within and across sectors, what recruitment and retention barriers may exist, what actions will be needed by a range of actors to address these. The Action Plan will also address certain cross cutting challenges – such as those covered by the local capacity task and finish group. Government and industry are already addressing these challenges, via schemes such as Skills Bootcamps, Free Courses for Jobs, Highter Training Qualifications (T Levels) and apprenticeships, and will continue to do so. More

#	Recommendation	Response
		information on the support provided through these schemes was included in the Net Zero Growth Plan March 2023.
Priority R2022-200	As part of reforms to electricity pricing, remove legacy policy costs associated with the historical deployment of less-mature low-carbon electricity generation from electricity prices. The rebalancing of policy costs should remove market distortions, and manage any adverse distributional impacts of a 'polluter pays' approach. **Primary responsibility**: HMT / DESNZ	In the *Powering Up Britain* publication of March 2023, the government accepted the recommendation from the *Independent Review of Net Zero* that government should commit to outlining a clear approach to gas and electricity price rebalancing by the end of 2023/24 and should make significant progress affecting relative prices by the end of 2024. We are working to develop our approach to rebalancing to meet these commitments and will provide further information in the coming year.
Priority R2022-207	Publish a proposal on the business model for deployment of large-scale (>1 MtCO2/year) engineered removals. **Primary responsibility**: DESNZ	In the *Net Zero Strategy* we committed to developing markets and incentives for investment in Greenhouse Gas Removals (GGR) by consulting on our preferred business models to incentivise early investment in GGRs. We consulted at the end of 2022 and responded in June this year. Our response confirms that we are minded to progress work on a GGR business model, based on a 'contract for difference'(CfD) structure, to enable a portfolio of GGR technologies to deploy at commercial scale in the UK this decade subject to affordability and value for money. This will help to deliver our world-leading ambition to deploy at least 5 Megatonnes of engineered removals annually by 2030, and provide new economic opportunities for the UK. We will develop detailed policy proposals in collaboration with industry and other stakeholders, including through the GGR Business Model Expert Group. We will publish an update later this year on the GGR business model, which will set out further detail on key elements of the business model design and eligibility criteria. In

#	Recommendation	Response
		March, we also published a response to the power Bio-energy with Carbon Capture and Storage (BECCS) business model consultation. The response confirmed our preferred approach of a CfD for electricity and CfD for carbon as a dual mechanism, under a single contract ('CfDe + CfDc') whilst also setting out several early design features of the business model.
Priority R2022-241	Create clear incentives for manufacturing facilities not currently covered by the UK ETS to decarbonise. **Primary responsibility**: DESNZ	The UK Emissions Trading Scheme (ETS) currently includes regulated activities in industrial facilities which result in greenhouse gas emissions, including combustion of fuels on a site where combustion units with a total rated thermal input exceeding 20MW are operated. As noted in *Powering Up Britain*, the Government will explore expanding the UK ETS to more sectors of the economy, including high-emitting sectors. Subject to agreement within the UK ETS Authority, we will set out a long-term pathway for the UK ETS and aim to do so this year. The *Powering Up Britain* announcement also included plans for a dedicated energy advice service for SMEs and plans for a pilot offering subsidised energy assessments and grants for energy efficiency measures. Government has a range of policies to incentivise the decarbonisation of manufacturing and industrial sectors, including manufacturing facilities not currently covered by the UK ETS. • Manufacturing sites can apply for grant funding towards the costs of decarbonisation projects. The Industrial Energy Transformation Fund (IETF) targets existing industrial processes, helping industry to cut energy bills by investing in more efficient technologies and reduce emissions by bringing down the costs and risks associated with investing in deep decarbonisation technologies. The fund is open to a broad range of industrial sectors of all sizes and will support

#	Recommendation	Response
		applicants, both within and outside of the ETS. • The Government published the 2023 *Enabling Industrial Electrification: a call for evidence* with the aim of designing an optimal policy framework to enable industrial sites to switch away from fossil fuels to electricity. Alongside this, the Government has committed to outlining a clear approach to gas and electricity price rebalancing by the end of 2023/2024 and to make significant progress towards affecting relative prices by the end of 2024. We are working to develop our approach to rebalancing to meet these commitments and will provide further information in the coming year. In particular, for smaller emitters, we expect that energy efficiency will be an important first step towards decarbonisation, so it is important to highlight ongoing policy development arising from initiatives such as the pilot Business Energy Advice Service and the consultation on a potential future Climate Change Agreements Scheme. Insights are also expected from the Local Industrial Decarbonisation Plans to address decarbonisation opportunities for dispersed sites.
Priority R2022-272	Confirm the details of the ZEV mandate in regulation. As set out in the consultation, this should impose targets on manufacturers that are at least as ambitious as those in the Transport Decarbonisation Plan and should drive consistent growth in sales of EV cars and vans through the 2020s to meet the 2030 phase-out date. **Primary responsibility**: DfT	We are committed to phasing out the sale of new non-zero emission vehicles by 2035. Following three consultations on a proposed Zero Emission Vehicle (ZEV) mandate, we have confirmed our final proposals in our government response on 28 September, jointly agreed with Devolved Administrations. Regulations were laid in the UK Parliament, Scottish Parliament and Welsh Parliament on 16 October 2023, requiring vehicle manufacturers to ensure an increasing percentage of new cars and vans sold in Great Britain to be to be ZEVs from 2024.

#	Recommendation	Response
Priority R2023-037	No airport expansions should proceed until a UK-wide capacity management framework is in place to annually assess and, if required, control sector GHG emissions and non-CO2 effects. A framework should be developed by DfT in cooperation with the Welsh, Scottish and Northern Irish Governments over the next 12 months and should be operational by the end of 2024. After a framework is developed, there should be no net airport expansion unless the carbon-intensity of aviation is outperforming the Government's emissions reduction pathway and can accommodate the additional demand. **Primary responsibility**: DfT	We are anti-aviation emissions, not flying, and want to deliver sustainable flying for everyone to enjoy holidays, visit friends and family overseas and to travel for business. We remain of the view that our existing policy frameworks for airport planning – the Airports National Policy Statement and Beyond the horizon, the future of UK aviation: Making best use of existing runways - provide a robust and balanced framework for airports to grow sustainably within our strict environmental criteria. Our analysis in the *Jet Zero Strategy* continues to demonstrate that the sector can achieve net zero carbon emissions by 2050 without the government needing to intervene directly to limit aviation growth. The analysis uses updated airport capacity assumptions consistent with the latest known expansion plans at airports in the UK. Planning decision-makers and applicants should consider all relevant Government policy, including the Jet Zero Strategy, when considering airport expansion proposals. The Government has always been clear that the expansion of any airport must meet our climate change obligations. Any planning application submitted by an airport will be judged by the relevant planning authority, taking careful account of all relevant considerations, including environmental impacts and proposed mitigations. We will review our *Jet Zero Strategy* every five years to ensure the aviation sector is on track to achieve net zero by 2050, and, if appropriate, we will consider reviewing our policy frameworks for airport planning to ensure they remain compatible with achieving our net zero target.

#	Recommendation	Response
Priority R2023-073	Implement a whole-systems approach to address Energy from Waste (EfW) emissions, including setting out the implications of rising EfW use for waste decarbonisation and confirming plans to include EfW within the UK ETS. A moratorium on additional EfW capacity should be introduced subject to a review of capacity needs and how they align with Government emissions pathways. Further clarity is also needed on how decisions on allowing further EfW plants will be made. **Primary responsibility**: DESNZ	The Government is already undertaking several actions to reduce emissions from Energy from Waste (EfW). For example, the waste Industrial Carbon Capture (ICC) business model has been designed to incentivise the deployment of carbon capture technology in the residual waste management sector, where there is no viable alternative to achieve deep decarbonisation. Two waste carbon capture and storage (CCS) projects have been shortlisted on the Track-1 Project Negotiation List to proceed to the negotiations phase of the CCUS Cluster Sequencing Process. These projects will, subject to negotiations, demonstrate the commercial viability of CCUS in the residual waste management sector and help facilitate future deployment of the technology and decarbonisation of the sector. Furthermore, to ensure future new build EfW plants are built ready to decarbonise, we have consulted on including EfW within Decarbonisation Readiness requirements and later this year we will be publishing an addendum to the *Resources and Waste Strategy,* which will focus on net zero. The UK Emissions Trading Scheme (ETS) Authority has announced its intention to include EfW installations in the ETS from 2028, preceded by a 2-year monitoring, reporting and verification (MRV) period. The ETS sets a cap on emissions that can be released by covered sectors, and the cap will reduce in line with Net Zero targets. In line with the commitment in the *Resources and Waste Strategy* to monitor residual waste capacity, officials are currently assessing planned incinerator capacity against expected future residual waste arisings so we can understand

#	Recommendation	Response
		what future incineration capacity may be required following implementation of key commitments in the *Resources and Waste Strategy*. This further assessment of residual waste treatment capacity needs will be published in due course. Planning consent for large EfW plants (>50MW) in England & Wales is determined by the SoS in accordance with the *National Policy Statement for Renewable Energy Infrastructure*. For an application to be granted the Secretary of State should be satisfied, with reference to the relevant waste strategies and plans, that the proposed plant is in accordance with the waste hierarchy.
Priority R2023-080	Develop policies for industrial electrification that address general barriers such as investment constraints, as well as specific barriers for different industrial sub-sectors. **Primary responsibility**: DESNZ	The *Net Zero Growth Plan* reiterated the ambition to replace 50 TWh of fossil fuels per year by 2035 with low carbon alternatives, such as hydrogen, electricity and biomass. In March 2023, analysis in the *Net Zero Growth Plan* highlighted that fuel switching to electricity has the potential to reduce annual industrial emissions by between 7 and 19 MtCO2e by 2050, contributing between 15% and 40% of the (necessary) carbon abatement in industry by 2050. Currently, the Government provides support for fuel switching (including electrification) through the Industrial Energy Transformation Fund (IETF) and the Scottish IETF, which provides grants to help with the upfront costs of installing or retrofitting industrial equipment associated with electrifying industrial processes, and the Industrial Fuel Switching Competition (IFSC), which is innovation funding for electrification and enabling technologies. The Government recognises that there are several barriers to fuel switching to electricity. For example, electricity is currently

#	Recommendation	Response
		significantly more expensive than natural gas. In July 2023, the Government published a Call for Evidence on fuel switching to electrification. The responses will be used to build a greater understanding of the role of electrification in industry, the challenges industry faces when considering electrification options and to test early-stage policy thinking. This will then enable government to design an optimal policy framework to overcome barriers and manage interactions with the wider system, such as the review of electricity market arrangements (REMA) and future electricity networks.
Priority R2023-088	Publish a strategy and timeline for the decarbonisation of the iron and steel industry in line with the Carbon Budget Delivery Plan. **Primary responsibility**: DBT	We continue to work with the sector to support its decarbonisation options. The appropriate decarbonisation pathway for individual sites will be based on multiple factors and is a commercial decision for individual companies. The Government is working closely with companies as they make commercial decisions on the optimum decarbonisation route for their sites. As part of this, on 15th September 2023 HMG and Tata Steel announced a proposed joint investment package for an Electric Arc Furnace for greener steel production at Port Talbot. This proposed investment could reduce direct carbon emissions from the site by 5 million tonnes each year by 2030. This represents an 7% reduction in UK business sector and industrial process emissions. Tata Steel is now discussing these proposed arrangements with their trade union partners, ahead of formal consultation processes.
Priority R2023-092	Ensure that planning frameworks and guidance across the UK support a clear presumption against new consents for coal production. New coal extraction, whether in new mines or through the extension of existing infrastructure, should only be permitted for safe	Coal's share of our electricity generation has already declined significantly in recent years – from almost 40% in 2012 to around 2% in 2022. In line with our net zero target, government is committed to phasing out unabated coal-fired power

#	Recommendation	Response
	decommissioning, or where firm policy can be demonstrated to require the coal produced to be used (domestically or internationally) in a way that is compatible with Net Zero pathways (e.g. with at least 95% CO2 capture and storage). Planning Frameworks should reflect the declining role of coal in the context of binding UK and international GHG emissions targets. At present local plans are still required to proactively identify sites for future coal extraction. This practice is outdated and encourages new coal development. This practice should be ended immediately. **Primary responsibility**: DLUHC	generation by 2024 and all remaining coal fired power stations in Great Britain are scheduled to close before this date. As a consequence, demand for new coal licences has fallen away and there are only a very small number of potential coal projects in the pipeline that could result in new coal mining. There is, however, an important role for coal extraction for the steel industry; as a reducing agent, source of energy and carbon for the final product. Significant reduction of coal use in steel making would require major investments in alternatives. Extensive changes would be required to the Coal Authority's duties to establish an enforcement regime for them to monitor the purpose and end use of coal extracted from mining. The phasing out of future coal powered generation is a more proportional response than introducing a new regulatory regime at the coal mining end of the production chain. The National Planning Policy Framework (NPPF) already sets out that planning permission should not be granted for the extraction of coal unless the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if it is not environmentally acceptable, then it provides national, local or community benefits which clearly outweigh its likely impacts (taking all relevant matters into account, including any residual environmental impacts).
Priority R2023-093	Strengthen and clarify the tests in place for allowing any further exploration and extraction of oil and gas. Stringent tests, in line with the advice in our 2022 oil and gas letter, should be applied at each stage of the licensing and consenting process. These tests should be	The Government has implemented a Climate Compatibility Checkpoint to check whether offering new oil and gas licences remains compatible with meeting our climate targets. The emissions tests in the Checkpoint are stringent, giving Ministers key information to assess the climate impacts of

#	Recommendation	Response
	underpinned by a presumption against exploration and tighter limits on production, be assessed against more ambitious decarbonisation targets (well beyond the 50% target set out in the North Sea Transition Deal), and make use of the best available technology to minimise emissions associated with production. The criteria for approval, including with regard to decarbonisation targets, should be set out clearly and transparently. **Primary responsibility**: DESNZ	domestic production. The Checkpoint also looks ahead to whether the UK is forecast to remain a net importer of oil and gas; it would not be helpful environmentally, economically or in terms of maintaining offshore skills and supply chains for the transition, to reduce domestic production where this merely increases our dependency on imports. The Government's view is that the decarbonisation targets in the North Sea Transition Deal to reduce emissions from operations to 50% of 2018 levels by 2030 are ambitious and will help significantly reduce emissions, ultimately ensuring that the UK Continental Shelf reaches net zero by 2050.
Priority R2023-102	Publish the land use framework. Set out how this feeds into a wider agriculture and land use strategy that brings together how land can deliver its multiple functions including: reducing emissions and sequestering carbon, adapting to climate change, food security, biodiversity, domestic biomass production and wider environmental goals. The strategy must clearly outline the relationships and interactions with other relevant strategies and action plans across the UK, be spatially and temporally targeted, and aligned with action in the devolved administrations. **Primary responsibility**: Defra	We committed in the *Government Food Strategy* to publish a *Land Use Framework* in 2023, which will help to inform how we maximise co-benefits and manage any trade-offs between land uses, supporting the delivery of resilient, multifunctional landscapes that fit with local contexts and national needs. The Framework will encourage decision makers to take a long-term view when making choices on land use, anticipating changes to the climate, economic, and policy landscape. This can reduce the risk that subsequent changes are required to undo actions and safeguard investment, whilst allowing for the dynamic nature of ecosystems and markets. The Framework document will be supported by the best available evidence including the latest advances in spatial data science. We have developed the evidence base needed for policy to make a virtue of the diversity of natural capital across England's landscapes. We will not prescribe particular uses to landowners or managers from a national level and would rather ensure they have the information, supported by local

#	Recommendation	Response
		knowledge and strategies, required to make efficient decisions. For example, Local Nature Recovery Strategies will help to steer nature restoration projects by proposing locations where they can be most beneficial. We are taking account of the full range of action plans and strategies as we prepare the Framework. We also appreciate that in several areas of England, land use concerns are of a cross-UK nature and will continue to work closely with our counterparts in the Devolved Administrations to ensure that opportunities for collaboration can be realised. Development of a land use policy/framework for Northern Ireland is under consideration. We committed in the *Government Food Strategy* to publish a *Land Use Framework* in 2023, which will help to inform how we maximise co-benefits and manage any trade-offs between land uses, supporting the delivery of resilient, multifunctional landscapes that fit with local contexts and national needs. The Framework will encourage decision makers to take a long-term view when making choices on land use, anticipating changes to the climate, economic, and policy landscape. This can reduce the risk that subsequent changes are required to undo actions and safeguard investment, whilst allowing for the dynamic nature of ecosystems and markets. The Framework document will be supported by the best available evidence including the latest advances in spatial data science. We have developed the evidence base needed for policy to make a virtue of the diversity of natural capital across England's landscapes. We will not prescribe particular uses to

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		landowners or managers from a national level and would rather ensure they have the information, supported by local knowledge and strategies, required to make efficient decisions. For example, Local Nature Recovery Strategies will help to steer nature restoration projects by proposing locations where they can be most beneficial. We are taking account of the full range of action plans and strategies as we prepare the Framework. We also appreciate that in several areas of England, land use concerns are of a cross-border nature and will continue to work closely with our counterparts in the Devolved Administrations to ensure that opportunities for collaboration can be realised. Development of a land use policy/framework for Northern Ireland is under consideration.
Priority R2023-111	Announce a Secretary of State-level Climate Envoy that acts as the ministerial Head of Delegation before the 2023 UN General Assembly. **Primary responsibility**: DESNZ	The UK continues to play a leading role on climate change. Net zero remains a priority for the Government and a core objective of the new Department for Energy Security and Net Zero. The Secretary of State for Energy Security and Net Zero, leads on international climate change for the UK. The Minister of State for Energy Security and Net Zero will represent the UK at the COP28 negotiations as Ministerial Head of Delegation. The Prime Minister, Foreign Secretary, Minister Mitchell and Ministers from other departments have also confirmed that they will attend COP28. Beyond this, there are no plans to appoint a climate envoy.

#	Recommendation	Response
		Tackling climate change takes an all-of-government approach and as well as Department for Energy Security and Net Zero, Defra, FCDO, DfT and other government departments work collectively on priority climate and nature objectives. The UK also has an extensive overseas network of ambassadors, high commissioners and climate attaches working closely with international partners on climate ambitions.
Priority R2023-126	Clarify urgently and formalise the institutional responsibilities of the FSO, Ofgem and Ministers, for strategic planning and delivery of a decarbonised, resilient energy system. As part of this, Ofgem's objectives and duties must be updated to drive explicitly the delivery of the statutory Net Zero target, and to ensure climate and weather resilience. In addition to its Net Zero objective, the FSO must have responsibility for ensuring weather and climate resilience through its strategic planning role. The critical role of strategic investment in delivering these outcomes must be recognised, with appropriate mandates and powers for Ofgem and the FSO. The formalisation of responsibilities should be implemented through the Energy Bill and revisions to the Strategy and Policy Statement. As part of the phased approach to the implementation of the FSO, expanding the remit with respect to hydrogen should be considered as a priority. **Primary responsibility**: DESNZ	Government has recently modified Ofgem's existing duties via the Energy Bill to include a specific reference to the net zero targets and five-year carbon budgets in the Climate Change Act 2008. This move reaffirms government's commitment and mandate in achieving our net zero targets and ensures that Ofgem's role in net zero in clear. Ofgem will be required to consider, as part of the everyday decisions they make as the regulator, how their decisions promote the net zero objective. The role of Ofgem in net zero, and the institutional responsibilities of Future Systems Operator (FSO), Ofgem and ministers, including in ensuring strategic investment in the energy sector, will be clarified as part of ongoing work to update the Strategy and Policy Statement for Energy Policy in Great Britain. We also recognise that whole system strategic planning will be a critical role for the FSO. DESNZ and Ofgem have set out that the FSO, from Day 1, will be responsible for developing a Central Strategic Network Plan for electricity, as well as undertaking gas strategic network planning. Government has also recently published a consultation response setting out that the FSO will undertake strategic network planning for hydrogen, and we will work with Ofgem and ESO/FSO to

#	Recommendation	Response
		develop the detail of this role, including how and when this can be phased into the FSO's responsibilities. The FSO's statutory duties, including its duty to consider whole system impacts, will require it to take a broad view of the energy sector, including in hydrogen from Day 1. In addition, we are currently consulting on a new role for the FSO to analyse and understand electricity system resilience by performing horizon scans of risks that could impact the safety, security or resilience of the system. This includes consideration of weather and climate resilience, amongst other resilience risks.
Priority R2023-128	Identify a set of low-regret electricity and hydrogen infrastructure investments that can proceed now. Either prior to, or as part of publication of the cross-sectoral infrastructure strategy, identify on a whole system and economy-wide basis which areas are unlikely to be suitable for hydrogen (such that electrification and alternatives can be progressed), alongside potential candidate areas for hydrogen. This should be used to inform a set of low-regret investments that can proceed immediately. **Primary responsibility**: DESNZ	Acceleration of electricity network delivery is key to meeting the government's renewables ambitions. HMG has already taken action to improve strategic planning and speed up consenting and regulatory approvals. Ofgem has accelerated the delivery of nearly £20 billion of strategic transmission projects, and we are supporting them to enable strategic investment in their regulatory frameworks more generally, as set out in the Strategy and Policy statement which is currently out for consultation. In June 2023, the Electricity Networks Commissioner submitted their recommendations to Government, advising how the timelines for transmission network delivery can be reduced by half. We will build on the momentum generated from this report and target specific priority areas for immediate focus. We recognise the fundamental change needed and have committed to publishing an *Action Plan* this year in response to the Commissioner's recommendations.

#	Recommendation	Response
		Hydrogen transport and storage infrastructure will serve as critical enablers for the growth in the hydrogen economy required to meet our up to 10GW low carbon hydrogen production capacity ambition by 2030. Alongside connecting hydrogen producers with consumers, a well-developed hydrogen transport and storage network could be especially valuable for wider energy system resilience and security. In the *British Energy Security Strategy*, the Government committed to designing, by 2025, new business models for hydrogen transport and storage infrastructure. In order to progress work to meet this commitment, we ran a consultation on the high-level design of the business models between August and November 2022, and have since introduced legislative amendments to the Energy Bill to provide a legislative framework underpinning the delivery of the business models. In the government response to this consultation, we set out our minded-to position on our approach to strategic planning for the build-out of hydrogen transport and storage infrastructure at pace. Our approach to strategic planning aims to help identify strategically significant projects, which is an initial step to prioritising early, low-regret hydrogen infrastructure investments to proceed with. We intend to publish a 'hydrogen networks pathway' setting out the next steps in our vision for the development of hydrogen transport and storage infrastructure in the UK, alongside a production roadmap, by the end of 2023.

#	Recommendation	Response
Priority R2023-129	Create a Minister-led infrastructure delivery group, advised by the new Electricity Networks Commissioner, to ensure enabling initiatives for energy infrastructure build are taken forward at pace and necessary policy changes are implemented across the UK, to deliver a decarbonised and resilient power system by 2035. This should bring together key senior parties in DESNZ, Ofgem, Defra, DLUHC, the Scottish and Welsh Governments, the Future System Operator and asset owners, to deliver necessary policy changes and monitor progress across the initiatives so that swift action can be taken where required to expedite progress. Priorities include overhauling planning and consenting (with strategically important projects prioritised); adequately resourcing regulatory, planning and environmental consenting bodies; reforming the connections process; driving strategic investment; and ensuring the necessary strategic planning and skills/supply chain development is taking place. **Primary responsibility**: DESNZ	We agree with the Climate Change Committee on the importance of speeding up consenting and building network infrastructure, as well as speeding up connection times. As we work towards accelerating electricity transmission network deployment, we will ensure we have the appropriate governance structures in place to get all the right people together to take this work forwards. This will require significant cooperation between Government, industry and other stakeholders, as well as coordination within industry, as highlighted by the Electricity Networks Commissioner's report. As such, we plan to create new Minister-led governance processes with industry focussing on the acceleration of electricity transmission infrastructure. However, we do not believe a wider minister-led infrastructure delivery group is necessary at this time. The Department for Energy Security and Net Zero has robust governance and reporting processes at Ministerial and official level for both strategy and delivery, attended by representatives from all relevant Government departments to support coordination of the delivery of net zero ambitions. Policy and delivery are also supported by expert advice from bodies such as the National Infrastructure Commission as well as sector-based bodies, for example, the Offshore Wind Industry Council which provides a forum for industry, government and regulators to work collaboratively together. The Government is also reforming the planning system as a critical dependency for delivering major infrastructure in line with Net Zero ambitions; the Government is currently consulting on its *Action Plan* for reform of nationally significant infrastructure.

#	Recommendation	Response
Priority R2023-138	Publish a comprehensive long-term strategy for the delivery of a decarbonised, resilient, power system by 2035. This should comprise a portfolio approach to developing the full range of low-carbon flexibility options, including demand flexibility, storage, hydrogen, gas CCS and interconnection capacity. It should set out how the low-carbon flexibility required to replace unabated gas will be delivered (12-20 GW of low-carbon dispatchable capacity by 2035), as well as clarifying any minimal residual role unabated gas is expected to play by 2035 (up to around 2% of annual electricity production) and the strategy for unabated gas phase-out. It should cover the strategic decisions required, the milestones and timeline for delivery and the governance and oversight arrangements. It must set out plans and contingencies for addressing key risks on a co-ordinated basis (e.g. network development and connections, planning and consenting, CCS, hydrogen and nuclear). **Primary responsibility**: DESNZ	The Department for Energy Security and Net Zero recognises the value of a short overarching plan that sets out how the various policies to decarbonise our electricity system, and deliver a reliable system which minimises costs to consumers form a coherent whole. We are implementing a 'whole system' approach to overseeing delivery of the Government's objectives for building out the future electricity system and will use analytical and portfolio management techniques to consider potential options, measure uncertainty and manage the risks, issues, assumptions and interdependencies. The Department will provide further details on its progress. Delivering our ambitions will require a portfolio approach across a wide range of low carbon technologies, including the flexible technologies capable of replicating the role of unabated gas such as power CCUS, hydrogen to power, short and long duration storage, and demand side response. However, it is not our intention to determine the exact configuration of the future electricity system in advance. We will retain the flexibility to adapt to changing circumstances, develop market frameworks that incentivise a low-cost, reliable system and provide the opportunity for innovation to develop new approaches and drive down costs, whilst ensuring we remain on track to deliver deep decarbonisation in the power sector consistent with the emissions trajectory set out in the *Net Zero Strategy.*
Priority R2023-155	Review and update the National Planning Policy Framework to ensure that Net Zero outcomes are consistently prioritised through the planning system, making clear that these should work in conjunction with,	DLUHC continues to consider how the planning system can further support our commitment to reaching Net Zero. As part of our proposed changes to the planning system, and as committed to in the *Net Zero Strategy*, we intend to review national planning policy to make sure it further contributes to

#	Recommendation	Response
	rather than being over-ridden by, other outcomes such as development viability. **Primary responsibility**: DLUHC	climate change mitigation and adaptation. The NPPF is already clear that the planning system should support the transition to a low carbon future in a changing climate. At the heart of the framework is the presumption in favour of sustainable development, for plan making, this means that all plans should promote sustainable patterns of development that seeks to improve the environment and mitigate climate change. It also means that planning applications which accord with an up-to-date plan should be approved.
Priority R2023-162	Empower people to make green choices by communicating the most impactful ways to reduce emissions, such as changing car travel, home energy use and dietary behaviours and reducing air travel, and support people to make these choices including through regulation and incentives. Government should lead by example by visibly adopting these green choices. **Primary responsibility**: DESNZ	The *Net Zero Strategy* sets out six principles on how government will empower the public to make green choices, which we recommitted to in the *Net Zero Growth Plan*. We also committed to going further, outlining our approach to communicating and supporting public awareness of net zero and emissions reduction through a Public Engagement Framework and Net Zero Roadmap. Government's communications teams continue to work alongside policy experts to create campaigns to support people in making these choices, such as the 'It All Adds Up' campaign launched in 2022. Our approach is to make the green choice the easiest, by removing inconvenience and increasing the availability of green choices, to empower people to make their own choice, and to support green choices in a way which incentivises and maintains freedoms.
Priority R2023-165	Publish guidance for businesses on what activities it is appropriate to 'offset' and when. This guidance should include confirmation that a business can only accurately use carbon credits to claim to be 'Net Zero' once nearly	The UK Government recognises the role carbon markets can play in enabling businesses to contribute to the net zero transition and in providing an important source of finance for climate related investment. The use of credits for the purposes

#	Recommendation	Response
	all emissions are reduced and the remaining are neutralised by high-quality permanent removals. Formalise this by: establishing 'Net Zero' as a statutory definition; drawing on consumer protection law or advertising standard rules to ensure businesses don't claim 'Net Zero' based on an inappropriate reliance on 'offsetting'; and setting out in UK Environmental Reporting Guidelines and the Net Zero Transition Plan Standard a requirement for businesses to disclose why carbon credits are used rather than direct emissions reduction in net emissions claims. **Primary responsibility**: DESNZ	of offsets should be in addition to direct action by businesses, reflect genuinely additional removal and/or reduction in GHG emissions and align with a credible science-based pathway to net zero. The Integrity Council for the Voluntary Carbon Market (ICVCM) and the Voluntary Carbon Markets Integrity Initiative (VCMI), both of which were created during the UK's COP26 Presidency, have recently published guidance on the high integrity use of voluntary carbon credits by businesses. *The Green Finance Strategy* committed to consider the potential for these outputs to serve as a basis for international best practice, and the extent to which they could be incorporated within relevant regulatory regimes. Building on these international initiatives and learning from existing markets, Government is providing guidance to businesses on what constitutes high integrity nature and nature-based carbon credits. In March, we published the *Nature Markets Framework*, which set out principles for the development of high integrity nature markets, and launched our Nature Investment Standards programme in partnership with the British Standards Institution (BSI). The Government will this year engage stakeholders on an update to the Environmental Reporting Guidelines (ERG), which provide voluntary environmental reporting guidance for UK organisations and sets out principles specifying the credit quality attributes to be demonstrated by retailers. Furthermore, regulators, such as the Advertising Standards Authority and Competition and Markets Authority, also provide guidance to businesses that are making green claims. The Government has also committed to consult later this year on specific steps and interventions needed to mobilise

#	Recommendation	Response
		additional finance through high-integrity carbon and nature markets whilst protecting against greenwashing. This consultation will respond to the CCC's report on Voluntary Carbon Markets and Offsetting, and include consideration of the role of policy and regulation regarding the role of carbon credits in net zero claims. The Government will this year engage stakeholders on an update to the Environmental Reporting Guidelines (ERG), which provide voluntary environmental reporting guidance for UK organisations and sets out principles specifying the credit quality attributes to be demonstrated by retailers. Furthermore, regulators, such as the Advertising Standards Authority and Competition and Markets Authority, also provide guidance to businesses that are making green claims. The Government has also committed to consult later this year on specific steps and interventions needed to mobilise additional finance through high-integrity carbon and nature markets whilst protecting against greenwashing. This consultation will respond to the CCC's report on Voluntary Carbon Markets and Offsetting, and include consideration of the role of policy and regulation regarding the role of carbon credits in net zero claims.
Priority R2023-171	Implement a comprehensive delivery mechanism to address degraded peatland and extend current restoration ambition set out by the UK government and the devolved administrations beyond existing timeframes, including through addressing barriers to increasing capacity. Peat restoration targets include the need to remove all low-productive trees (i.e. less than YC8) from peatland (equivalent to 16,000 hectares by	Defra set out an ambitious target for peat restoration in England in the *Net Zero Strategy* to restore approximately 280,000 hectares by 2050 (including all upland peat). Natural England will publish a Peat Restoration Roadmap in 2025 to set out a clear and comprehensive trajectory for peat restoration in England and how this will be achieved.

#	Recommendation	Response
	2025), and restore all peat extraction sites by 2035 (equivalent to 50,000 hectares by 2025). **Primary responsibility**: Defra	The Environmental Land Management schemes will provide the main delivery mechanism for peatland restoration from 2025. The current Nature for Climate Peatland Grant scheme acts as an important precursor to accelerate delivery of peatland restoration. Since 2020, the Nature for Climate Fund has committed funding to restore over 27,000 hectares of peatlands to a natural and healthy state. The peat restoration sector in England is relatively small and the workforce will need to expand to meet future targets. We will shortly launch a research project to better understand the sector capacity, alongside developing training plans for training. We will work with the sector to understand any short-term solutions that could be implemented whilst the research project is ongoing. On afforested peat, where yield class does not meet the YC10 threshold peatland habitat restoration is encouraged and the site may be eligible for a peatland restoration grant. This is recognised by the Government's policy on when to convert forests to open habitats in England which sets out that compensatory planting is not required following the removal of low yielding forestry on peat. On lowland agricultural peat, Government intends to take forward action on all recommendations of the independent Chair of the Lowland Agricultural Peat Task Force ("Caudwell Report"). Findings from Defra's lowland peat projects will inform the design of a future, larger-scale programme based around water storage and water management, which will help us address the degradation of peat in these areas.

#	Recommendation	Response
Priority R2023-176	Set out a clear process and governance framework for delivering credible, coordinated energy planning across local, regional and national levels. This should include guidance on responsibilities for producing, feeding into and implementing plans at each level (e.g. clarifying the respective roles of local authorities, Ofgem, the Future System Operator, network operators and the Government among others); their scope and the decisions to be made at each level; and a required methodology and standardised assumptions framework. This should include providing appropriate support and funding for delivery, ensure that proposals complement existing initiatives (e.g. on heat network zoning) and put in place processes for coordinating across boundaries and incorporating meaningful public engagement into decision-making. **Primary responsibility**: DESNZ	We agree with the Climate Change Committee on the importance of speeding up consenting and building energy infrastructure. As we work towards accelerating our transition to a net zero energy system, we will ensure we have the appropriate governance structures in place to get all the right people together to take this work forwards. This will require significant cooperation between Government, industry and other stakeholders, as well as coordination within industry. However, we do not believe a wider minister-led infrastructure delivery group is necessary at this time. The Department for Energy Security and Net Zero has robust governance and reporting processes at Ministerial and official level for both strategy and delivery, attended by representatives from all relevant Government departments to support coordination of the delivery of net zero ambitions. Policy and delivery are also supported by expert advice from bodies such as the National Infrastructure Commission as well as sector-based bodies, for example, the Offshore Wind Industry Council which provides a forum for industry, government and regulators to work collaboratively together. We will keep governance arrangements under review. The Government is also reforming the planning system as a critical dependency for delivering major infrastructure in line with Net Zero ambitions; the Government is currently consulting on its *Action Plan* for reform of nationally significant infrastructure.

#	Recommendation	Response
Priority R2023-190	Narrow the scope of the strategic decision prior to 2026 by: publicly affirming that electrical heat is the default option in all new buildings and existing properties off the gas grid; prohibiting connections to the gas grid for new buildings from 2025; setting out clear routes for other properties or areas where electrification or heat networks represent low-regret options; and clarifying the Government's position on the economy-wide Priority of use-cases for hydrogen – in particular its potential to help manage peak demands for both heat and electricity, and its role in hybrid heating systems. **Primary responsibility**: DESNZ	Heat pumps and heat networks are established technologies that will be the primary means for decarbonising heating over the next decade and play a key role in all 2050 scenarios. Annual deployment of heat pumps will potentially need to reach up to 1.6 million installations by 2035. Against that background, Government is clear that: 1. Anyone wanting to install a heat pump should do so, irrespective of location. No one should hold back on installing a heat pump or connecting to a heat network on the basis that hydrogen may become an option later. 2. Given heat pumps will play a prominent role in all scenarios, existing heating engineers should consider training to install heat pumps. Installers can access support to do so as part of the Heat Training Grant. 3. There are some properties for which hydrogen heating will never be a realistic option, in particular those not on the existing gas grid. Furthermore, the Future Homes Standard (FHS) will ensure that from 2025 new homes are built with low carbon heating and we expect heat pumps will become the primary heating technologies for new homes under the FHS, with heat networks also playing a role. Whilst heat pumps and heat networks will be the primary means of decarbonisation for the foreseeable future, there is the potential for hydrogen to play a role in slower time in some locations. The Government will therefore continue its

#	Recommendation	Response
		programme of hydrogen heating trials and wider research to assess feasibility. Decisions on hydrogen heating will be taken in 2026, but we will accelerate work to analyse the costs and benefits of heat pathways. Once established, we will request the Future Systems Operator advise government on the energy system impacts of heat decarbonisation pathways, including how best to manage a highly electrified system.
Priority R2023-192	Ensure that funding and support are set at the correct level to meet the UK Government afforestation target of 30,000 hectares per year by 2025, and illustrative *Net Zero Strategy* targets of 40,000 hectares and 50,000 hectares by 2030 and 2035 respectively. Further clarity is required regarding funding beyond 2025. Support for delivery of new woodland creation should integrate with nature and adaptation objectives, and also address contractor availability, capacity to process funding applications, and advice for farmers to transition to woodland management approaches. **Primary responsibility**: Defra	Government has committed over £675 million in Nature for Climate funding to support increased afforestation and woodland management over the course of this Parliament. This has funded a range of schemes including the Forestry Commission's England Woodland Creation Offer (EWCO), the expansion of England's Community Forests and expanding the public forest estate. The Nature for Climate Fund is supporting investment in sector capacity and skills, through initiatives such as the £1.4 million Forestry Training Fund and Forestry Commission's Professional Forester Level 6 Apprenticeship programme. There has been significant investment in Forestry Commission's and other delivery partners' capacity to support landowners in making the transition to woodland creation. Overall, tree planting and woodland creation rates in England have increased by nearly 40% since last year to 3,627 hectares. We know there is more to do and will continue work with partners at pace to increase the nation’s tree cover and boost the forestry sector. We are making it easier and faster to plant trees. We consulted on simplifying the Environmental Impact Assessment process for afforestation projects, particularly in high-opportunity areas

#	Recommendation	Response
		for woodland creation where there are unlikely to be negative environmental impacts. We are working with the Forestry Commission to streamline the consultation process for tree planting and improve mapping to support faster decision-making for new woodland. We are providing a range of grants for landowners to support new proposals and to manage trees on their land. The Environmental Land Management schemes (ELMs) will support woodland expansion in England post-2025, supported by an expected increase in private funding through increased demand for timber, as well as natural capital markets. We intend for EWCO to transition into ELMs from 2024. Our approach to addressing climate risks to woodland biodiversity and the forestry sector were set out in the third *National Adaptation Programme* published this year.
R2022-003	Produce a roadmap to inclusion of saltmarsh and seagrass in the greenhouse gas inventory, and specify a suggested level of inclusion (i.e. Tier 1, 2 or 3), the additional data required to facilitate this, and an indicative timescale for inclusion. **Primary responsibility**: DESNZ	The Department for Energy Security and Net Zero cannot currently commit to the inclusion of coastal wetlands (including saltmarsh and seagrass habitats) in the UK Greenhouse Gas Inventory (GHGI). At present there are significant data gaps surrounding emissions from coastal wetlands, activity data regarding extraction activities, and habitat extent which hinder the accurate reporting of emissions from these habitats. This information must be collected before a decision on inclusion in the GHGI can be made. Defra has established a cross administration UK Blue Carbon Evidence Partnership to progress the evidence base on blue carbon. Through this partnership, Defra, Department for Energy Security and Net Zero and the Devolved Administrations are working together to produce a roadmap to potential inclusion, and fill identified

#	Recommendation	Response
		evidence gaps, which have been set out in a recent report published by Department for Energy Security and Net Zero.
R2022-004	As part of strengthening the regulatory baseline, extend coverage of Nitrate Vulnerable Zones across all of the UK in order to promote best practice in management of inorganic fertilisers and organic manure and slurry. **Primary responsibility**: Defra	Agricultural policy is a devolved matter. In England, alongside the requirements of Nitrate Vulnerable Zones, national regulations are already in place in the form of the Farming Rules for Water brought in to promote best practice including on nutrient management. Through the *Plan for Water*, we outlined our commitment to improve our farming laws to make them clear, simple, and effective at improving the environment, including our Environment Act targets. We are already taking significant action to fulfil our commitment. We continue to work with the Environment Agency to improve compliance levels, increasing their funding to be able to conduct at least 4,000 inspections on farms each year. At a local level we are supporting our farmers to reduce nutrient runoff by investing £200 million in grants for improved slurry storage infrastructure and precision spreading equipment. This makes a further £166 million available for new investment in slurry equipment and infrastructure. In Northern Ireland, the Future Agricultural Policy will encourage best practices in inorganic fertiliser, organic manure and slurry management. Mandatory farming rules for the management of inorganic fertilisers and organic manure and slurry for the whole of Scotland were most recently updated in 2021, thereby meeting this recommendation without extending Nitrate Vulnerable Zones.

#	Recommendation	Response
R2022-006	Continue to support research and development into low-carbon farming practices, including behavioural, innovation and productivity measures. The risk of a high dependency on innovation and technology to meet GHG emission reductions should be assessed, and integrated with demand-side measures such as diet change and waste reduction. **Primary responsibility**: Defra	Defra focuses on innovation to reduce agricultural emissions given the current evidence base. We are supporting research and development for climate smart farming through Defra's £270 million Farming Innovation Programme, significant UKRI investments, and international leadership. We continue to develop the evidence base underpinning our pathways and are undertaking priority work to secure its delivery. As the Prime Minister set out in his speech on net zero on 20 September, this government has been clear that it does not intend to tell people to not eat meat or dairy, but instead supports consumers to have a healthy balanced diet as depicted by the Eatwell Guide. Meat and dairy consumption can form an important part of this. The Government's preferred approach to supporting consumers to make sustainable food choices is to support sustainable food production practices and high-quality British produce, whilst maintaining people's freedom of choice. Department of Agriculture, Environment and Rural Affairs of Northern Ireland continues to commission research into low carbon farming practices, including behavioural, innovation and productivity measures. In Scotland Research & Development support includes ClimateXChange, KTIF, Strategic Research Programme and grant funding innovative projects.
R2022-007	Develop the option of applying minimum environmental standards to imports of selected agricultural products, either for application via due diligence or at the border.	At the Farm to Fork Summit in May, the Prime Minister set out a range of measures to put British farming at the heart of trade policy. Environmental considerations are central to this approach in line with the manifesto commitment that the UK's

#	Recommendation	Response
	Primary responsibility: Defra	high environmental protection and food standards will not be compromised by international trade. The UK will continue to champion global action to tackle environmental issues. The Government is committed to working with the international community to make trade more sustainable now and for the future, through multilateral fora, bilateral free trade agreements, engagement with businesses, non-government organisations and charities, our diplomatic efforts and our trade promotion activity. This includes how we strengthen cooperation on domestic measures to promote sustainable supply chains – such as under due diligence legislation in the Environment Act.
R2022-010	Ensure incentives are set at the correct level to set a trajectory to achieve 58% of peatland restored by 2035, and 79% under restoration by 2050. All upland peat should be under restoration management by 2045. **Primary responsibility**: Defra	Currently, the Nature for Climate Fund is already providing over £33 million to restore 20,000 hectares of peatlands to a natural and healthy state. In England, Natural England will be publishing a Peatland Restoration Roadmap in 2025 which will set out our trajectory to deliver approximately 280,000 hectares of peat restoration by 2050 (including all upland peat). Defra is developing the Landscape Recovery and Countryside Stewardship schemes to provide the main delivery mechanism for peatland restoration from 2025 onwards. We are working to improve our understanding of the baseline condition of peat in England through the development of an England peat map. This new data will be a critical tool to ensuring we have a realistic trajectory for delivering peatland restoration to meet our targets.

#	Recommendation	Response
		Assessment of a bespoke peatland restoration plan for Northern Ireland is in the early stages of development. In 2020 the Scottish Government set out plans to invest £250 million over ten years to restore 250,000 hectares of degraded peatlands (around 17% of Scotland's degraded peatlands) by 2030. Restoration targets beyond 2030 will be considered in Scotland's next Climate Change Plan.
R2022-012	Implement Government's proposed policy on due diligence of forest-risk commodities and develop a further policy to remove unsustainable legal deforestation from UK supply chains that avoids the risk of resource shuffling. **Primary responsibility**: Defra	The UK Government introduced world-leading legislation through the Environment Act 2021 to tackle illegal deforestation in UK supply chains. This new law will make it illegal for larger businesses operating in the UK to use key forest risk commodities produced on land illegally occupied or used and require those businesses to implement due diligence systems. We are committed to introducing legislation for forest risk commodities through the Environment Act.. There is an ongoing challenge to address unsustainable legal deforestation globally and we are committed to delivering a package of integrated measures aimed at helping producers and reforming the international system to support sustainable production and sustainable global supply chains and reduce the UK's global deforestation footprint. As such, we are undertaking a series of domestic measures alongside international activities and collaborations, such as the FACT Dialogue, the Forest and Climate Leaders Partnership and engagement with the G7 and the WTO.
R2022-013	Improve data collection and standardise methodologies for monitoring of, and reporting on, international land use emissions that arise from UK consumption, particularly from deforestation. The Government should aim to report	Defra agree it is vital to understand and monitor the UK's international footprint through its consumption of goods produced outside the UK.

#	Recommendation	Response
	on these international emissions from deforestation on an annual basis from 2023. This may build on the experimental statistic of the Joint Nature Conservation Committee. **Primary responsibility**: Defra	The Government is continuing to work with the Joint Nature Conservation Committee to further develop the experimental statistic and aims to reach “official statistic” status in the coming years. This includes estimates of international land use emissions occurring as a result of deforestation, amongst other environmental impacts such as water use and species loss. The indicator is updated annually, with the next update aiming to significantly reduce the current 5-year time lag in reporting, to enable more up to date reporting of the environmental impacts of UK consumption. Further work is ongoing to improve the accuracy and granularity of the indicator.
R2022-021	Introduce the proposed regulations to ban the retail sale of peat in horticulture in England and Wales by 2024. Use by the horticultural sector should also end in 2024, earlier than the currently proposed 2028. Government must work with the horticultural industry achieve this. **Primary responsibility**: Defra	In England, the UK Government has always been clear of the need to end the use of peat and peat containing products in horticulture and have announced our intention to introduce legislation to ban the retail sale of peat by 2024. This will address approximately 50% of the peat sold and will be introduced when Parliamentary time allows. We are also working with the horticultural industry to understand better the technical barriers to replacing peat based growing media with suitable alternatives within the professional sector.
R2022-023	Provide support to tenant farmers to overcome contractual issues that restrict the long-term commitment and investment required to reduce emissions and sequester carbon on the land they manage. **Primary responsibility**: Defra	Tenant farmers will play a key role in helping us achieve our environmental goals. That is why Defra commissioned the Rock Review of tenant farming which was responded to on the 24 May 2023. To help tenant farmers deliver environmental outcomes alongside food production, Defra has designed the Sustainable Farming Incentive to be accessible to tenants on short term agreements. Defra is working with the newly established Farm Tenancy Forum to inform the design of Countryside Stewardship so that is as accessible as possible to tenants.

#	Recommendation	Response
		We have encouraged collaborative tenant/landlord applications for round one of the Landscape Recovery Scheme and worked with the sector to issue industry led guidance for how tenants and landlords can work together to overcome barriers to tree planting. They can also work together to enter private environmental schemes. Proactive communication and a shared vision for management of the land is key. Land tenure arrangements are different in Northern Ireland, this is, however, under consideration. Future tenant farming legislation will provide a range of measures to support climate mitigation in Scotland.
R2022-027	Set out how the objective in the Government Food Strategy to 'deliver a sustainable, nature positive, affordable food system' will be achieved, including the mechanisms to address the interaction between food systems and other land use needs, climate, nature, and integrated alongside a public shift towards low-carbon diets. **Primary responsibility**: Defra	The Government is committed to working with industry to ensure the food system is sustainable and affordable. We committed in the *Food Strategy* to publish a Land Use Framework in 2023, which will help to inform how we maximise co-benefits and manage any trade-offs between land uses, supporting the delivery of resilient, multifunctional landscapes that fit with local contexts and national needs. The Food Data Transparency Partnership is developing a consistent approach to measuring greenhouse gas emissions at a company level and a mandatory methodology for food eco-labels, supporting consumer choices. At the Prime Minister's UK Farm to Fork Summit in May this year, we built upon the strategic objectives in the *Food Strategy* in making commitments on 2024 labour availability, trade principles, innovation funding, planning easements and energy security. These will help deliver our two main priorities

#	Recommendation	Response
		for the food system – resilience and security of food supply, and food sustainability.
R2022-028	Put in place robust frameworks for monitoring, reporting and verification of post-CAP farm subsidies and agriculture environment schemes to assess their effectiveness in delivering their environmental objectives, including for climate change mitigation and adaptation. **Primary responsibility**: Defra	The Farming and Countryside Programme (FCP) in England, delivering post CAP farm support and environmental schemes, is developing a robust framework for measuring the effectiveness of delivery against key outcomes. These outcomes include productivity, environmental targets (in the Environmental Improvement Plan), net zero and animal welfare. The framework for monitoring, evaluation and learning includes tracking key metrics and indicators which are assessed and reported annually. Early indicators such as adoption of practices towards decarbonisation and uptake of environmental schemes are measured. A comprehensive monitoring and evaluation approach assessing progress towards key targets, such as carbon savings, uses trajectories and modelled data from relevant FCP schemes. Currently, evaluation activity is in place across 15 FCP schemes and a summary of evaluation learning is compiled annually to improve delivery and provide an indication of likely success in meeting outcomes. Department of Agriculture, Environment and Rural Affairs of Northern Ireland is developing robust frameworks for monitoring, reporting and verifying the Future Agricultural Policy Programme. Scotland is committed to integrating enhanced conditionality of at least half of all funding by 2025 and ensuring that the appropriate monitoring processes are in place to support that.

#	Recommendation	Response
R2022-029	Set in place action to overcome financial barriers that prevent take-up and innovation in low-carbon farming practices. This should include management incentives under the ELM scheme and approaches set by devolved administrations, grants for capital items and infrastructure, and support for research and development. **Primary responsibility**: Defra	Defra continue to provide incentives to overcome financial barriers which might limit uptake of low-carbon farming practices. Detail was published in the January 2023 Environmental Land Management update on how farmers can be supported to reduce carbon emissions, store carbon, and increase resilience to climate change, including through measures to manage soils. The update also announced the SFI management payment and a review of Countryside Stewardship payment rates. We are providing grants through the Farming Investment Fund, such as the Slurry Infrastructure grant, which supports farmers to improve or expand slurry storage capacity, and Precision Farming Equipment. We are spending £270 million through our Farming Innovation Programme, including to support low-carbon practices. In Northern Ireland the Future Agricultural Policy Programme will seek to incentivise low carbon farming, for example though its Investment Measure, Knowledge Transfer and Beef Sustainability measures. Scotland is committed to integrating enhanced conditionality of at least half of all funding by 2025.
R2022-030	Put in place action to overcome non-financial barriers that prevent adoption of low-carbon farming measures and land-use change (such as forestry, peatland restoration, establishment of agroforestry and biomass crops) to deliver emission reduction and carbon benefits. These include streamlining application processes and providing support for skills, training, and knowledge exchange in order to provide confidence to farmers to take up new measures.	Government agrees that the application processes should be as easy as possible for everyone. We have simplified the online application system to make it faster and easier for farmers to apply and have revised the scheme standards to make them clearer and self-explanatory. We are also working to create a single service through which farmers can see and apply for all the schemes for which they are eligible and have created a single landing page on GOV.UK on funding for farmers.

#	Recommendation	Response
	Primary responsibility: Defra	We will continue to work with external partners and farmers/land managers to ensure an effective future advice offering and training support package. This will support farmers and land managers to deliver on Defra schemes through the Agricultural Transition. The Farming Innovation Programme will also support knowledge exchange between farmers, growers, foresters, businesses, and researchers. This will enable the results and learnings from the projects to be shared widely. Provision of knowledge and innovation is a central component of Department of Agriculture, Environment and Rural Affairs of Northern Ireland's Future Agricultural Policy Programme. Scotland continue to support mechanisms/initiatives that communicate, educate and demonstrate benefits of mitigation and adaptation measures.
R2022-031	Set incentives to support agroforestry and hedgerows on UK farms. Plant trees on 2% of farmland by 2025 while maintaining its primary use, rising to 5% by 2035, and extend hedgerows by 20% by 2035 and better manage existing hedgerows. **Primary responsibility**: Defra	The Department for Environment Food and Rural Affairs will encourage and support agroforestry and hedgerows through our Environmental Land Management schemes. A hedgerows offer will be available within the Sustainable Farming Incentive (SFI) this year, paying for assessing and recording hedgerow condition, managing new and existing hedgerows, and establishing and maintaining hedgerow trees. This will help us achieve our commitment to support farmers to create or restore 30,000 miles of hedgerows by 2037 and 45,000 miles of hedgerows by 2050, returning hedgerow lengths in England to 10% above the 1984 peak (360,000 miles), as well as restore degraded hedges across the country. Our new offer to pay for the establishment and maintenance of in-field agroforestry systems in England will be available in

#	Recommendation	Response
		2024. This will help us achieve our aim of establishing silvoarable agroforestry on 10% of arable land in England by 2050, increasing the number of trees on farmland while supporting the farm's main agricultural output. Department of Agriculture, Environment and Rural Affairs of Northern Ireland will incentivise agroforestry and hedgerows through the Future Agricultural Policy Programme. In Scotland, four new agroforestry measures have been introduced to the Forestry Grant Scheme. Support is available for the creation and restoration of hedgerows through the Agri-Environment Climate Scheme.
R2022-032	Set out clear timeframes to end domestic and industrial peat extraction across the UK. Provide a mechanism to ensure the peat-extraction industries restore extraction sites to protect the peat resource. **Primary responsibility**: Defra	Domestic peat extraction no longer takes place in England; no new extraction licences will be issued. Most of the remaining industrial peat extractions sites in England are found in Somerset. We are working with Somerset County Council to develop an approach to end industrial peat extraction early. Restoration of extraction sites are a requirement of existing planning permissions. We expect that peat extraction will end once the sale of peat has been banned. Implementation of the NI Peatland Strategy, when published, will include a review of peat extraction. Scotland's National Planning Framework 4 does not support commercial peat extraction (except for whisky) and aims to minimise extraction damage and ensure restoration.
R2022-035	Set out how reform of agricultural subsidies in England under the new Environmental Land Management scheme will be targeted through the "public money for	In the January 2023 Environmental Land Management (ELM) update Defra set out how farmers and land managers will be paid to provide environmental and climate goods and services.

#	Recommendation	Response
	public goods" approach, both regionally and temporally, to incentivise land managers to adopt measures to reduce greenhouse gas emissions alongside delivery for food security, biodiversity and other environmental goals. **Primary responsibility**: Defra	This includes payments under all three elements of environmental land management schemes (Sustainable Farming Incentive, Countryside Stewardship, Landscape Recovery) for actions such as introducing cover crops, establishing agroforestry and maintaining carbon-rich habitat such as saltmarsh.
R2022-036	Take low-cost, low-regret actions to encourage a 20% shift away from all meat by 2030, rising to 35% by 2050, and a 20% shift from dairy products by 2030, demonstrating leadership in the public sector whilst improving health. **Primary responsibility**: Defra	As the Prime Minister set out in his speech on net zero on 20 September, this government does not intend to tell people to not eat meat or dairy, but instead supports consumers to have a healthy balanced diet as depicted by the Eatwell Guide. Meat and dairy consumption can form an important part of this. The Government's preferred approach to supporting consumers to make sustainable food choices is to support sustainable food production practices and high-quality British produce, whilst maintaining people's freedom of choice. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's Future Agricultural Policy Programme will encourage improvements in productivity and reductions in non-breeding livestock. Scottish Government notes: (1) the current Scottish Dietary Goal on red and processed meat overlaps with part of the CCC recommendation by recommending that people limit their intake of red and processed meat to around 70g per person per day (2) Population dietary advice across the UK is based around the Eatwell Guide. The environmental impact of the population following the Eatwell Guide, was calculated by the Carbon Trust in 2016 to create a 32% reduction in the populations dietary carbon footprint (3) that the CCC recommendation may pose nutritional risks in some population

#	Recommendation	Response
		groups and (4) that more evidence on the potential impacts is being sought to inform further consideration of this recommendation.
R2022-037	Introduce policy to support the reduction of food waste at the farm, supply chain and household levels. Food-waste reduction, and its implications, should also be integrated into the recommended Net Zero delivery strategy for the agriculture and land use sectors, as well as in plans for the waste sector. **Primary responsibility**: Defra	The Government has implemented a range of policies to tackle food waste. We are committed to meeting the UN Sustainable Development Goal 12.3 target by 2030. We support the Courtauld Commitment 2030, a voluntary agreement with industry that includes targets on food waste reduction, GHG emissions and water stress. 'Target Measure Act' Tools are available for businesses to reduce food waste as part of the Food Waste Reduction Roadmap. Through the Waste and Resources Action Programme (WRAP) we fund consumer behaviour change campaigns, including Food Waste Action Week and Love Food Hate Waste. We acknowledge more can be done to reduce food waste in primary production. We have taken powers to clamp down on unfair contractual practices through the ‘fair dealings’ powers in the Agriculture Act 2020 and this autumn will launch a review into fairness in the fresh produce sector, which will consider the role of specifications. In Northern Ireland this work is ongoing but slowed due to resource pressures. The Scottish Government has committed to reduce food waste by 33% by 2025 (excluding farm waste).
R2022-039	Work with the forestry sector and government agencies to support UK tree nurseries to increase domestic production of trees to meet the planting ambition and	Defra is continuing to help the domestic nursery sector improve the quality, quantity, diversity and biosecurity of planting stock. We are making over £8 million available through the Tree

#	Recommendation	Response
	reduce reliance on imports, along with the associated risks of pests and disease. **Primary responsibility**: Defra	Production Innovation Fund (TPIF) by 2025 to boost innovation through new technologies and ways of working in the nursery sector. We are also providing £8.8 million through the Tree Production Capital Grant (TPCG) to support nurseries and seed suppliers to modernise facilities and have made £1.8 million available through our Seed Sourcing Grant (SSG) to support activities that enhance the quality, quantity, and diversity of tree seed stands and orchards in England. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's sector engagement is ongoing consistent with Forests for Our Future programme delivery and regulatory requirements. The forestry nursery sector has successfully expanded production across GB, with ongoing grant support in Scotland.
R2022-043	Provide detail on how post-CAP agricultural subsidies and schemes in Wales will target incentives and delivery for climate mitigation alongside wider environmental goals such as climate change adaptation and biodiversity. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2022-044	The *Biomass Strategy* should set out the role that sustainable domestic production of perennial energy crops and short rotation coppice will play to contribute towards Net Zero. The strategy should align with the recommended development of a Government agriculture and land use strategy and outline how land for UK	The *Biomass Strategy* reviewed the amount of sustainable biomass available to the UK and how this resource could be best utilised across the economy to help achieve the Government's net zero and wider environmental commitments, while also supporting energy security.

#	Recommendation	Response
	biomass and forestry will be freed up. This should include specific targets to increase the area growing energy crops across the UK to 6,000 hectares per year by 2025, and 30,000 hectares per year by 2035. **Primary responsibility**: Defra	The *Biomass Strategy* sets out two biomass availability scenarios to provide a broad frame of reference within which to analyse how biomass might be used in a world where there is greater or lower availability. These are not intended to be upper or lower estimates of what we expect biomass availability to be, nor are they government targets for biomass production. Future biomass feedstock availability will depend on a range of factors, including government policies and market developments in the UK and in other countries.
R2022-045	Develop a comprehensive plan to increase the production and use of UK-sourced timber and support the long-term economic viability of domestic woodlands. **Primary responsibility**: Defra	The Government committed in the *Environmental Improvement Plan (EIP)* to grow and maintain the long-term domestic UK timber supply and both the EIP and England Trees Action Plan set out actions government is taking to support growth in the forestry sector. Industry are publishing their National Wood Strategy for England. The strategy will highlight the opportunities for innovation and growth in a sector that can contribute positively to net zero, biodiversity gain, and housing. The National Wood Strategy is expected to outline the steps needed to increase the nation’s wood production and utilisation. Defra is also working with stakeholders and across government to develop a policy roadmap to safely increase the use of timber in construction in England which is planned for publication in 2023. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's timber supply arrangements continue to underpin confidence in the wood processing and forestry sectors.

#	Recommendation	Response
		Scottish Government has a target to increase the use of Scottish timber in construction.
R2022-046	Ensure the Sustainable Aviation Fuel Mandate is legislated in time for it to become operational by the start of 2025, with a strong set of criteria for the fuels included in the mandate. **Primary responsibility**: DfT	The Government has previously committed to have the Sustainable Aviation Fuel (SAF) mandate legislation in place by 2025 and we are on track to deliver this. We have also confirmed that the SAF mandate will only support fuels that deliver the greatest greenhouse gas savings and have the least indirect impacts. The second SAF mandate consultation set out our proposed sustainability criteria and methodologies to guarantee this. Much of this is based on the well-established criteria in the Renewable Transport Fuels Obligation, which has a proven system of monitoring and compliance for renewable fuels. The government will confirm its final sustainability criteria in the government response to the second SAF mandate consultation by the end of 2023. Detailed compliance guidance will be published when the legislation is laid in parliament.
R2022-048	Commit to a policy on the UK ETS/Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) interaction as soon as possible, ensuring it is sufficiently environmentally stringent and that no credits from CORSIA are used for flights currently covered by the UK ETS unless and until they can satisfy strict eligibility criteria (equivalence, additionality, permanence, sustainability). The interaction should avoid double-compliance. **Primary responsibility**: DfT	Following the Department for Transport's initial consultation on implementing CORSIA, and in light of recent developments with CORSIA in ICAO, and the UK Emission Trading Scheme (ETS), we are carefully considering the approach to interaction between CORSIA and the UK ETS. We will consult further on our approach to CORSIA and UK ETS interaction in the near future seeking to have all legislation to implement CORSIA in place in 2024.

#	Recommendation	Response
		The UK is committed to ensuring the environmental integrity of carbon markets, which provide an important tool for a cost-effective pathway to net zero. The UK fully supports ICAO's criteria for CORSIA Emissions Units and played a key role in their development and agreement. We will negotiate for and provide technical expertise to support improvements to the scheme.
R2022-049	Continue to monitor seat occupancy over the period to 2027, during recovery from the COVID-19 pandemic, to ensure that the sector either returns to prior occupancy levels or routes are adjusted to account for low occupancy rates. Consider regulating aircraft occupancy standards if the trends do not return to pre-pandemic levels by 2024. **Primary responsibility**: DfT	The Government is committed to avoiding unnecessary emissions from empty or near empty aircraft departing the UK. During the pandemic, we saw a decrease in average load factors reflecting international travel restrictions and changes to passenger confidence and behaviour. During the pandemic the Government amended the rules governing airport slots to ensure that airlines would not need to operate flights solely to retain their historic slot rights. We do not believe that low volume flights were undertaken simply to retain slots during this time. However, there are reasons why flights may sometimes need to operate with lower loads, including maintenance, repositioning and training. In addition, where repatriation flights are needed, typically the aircraft would be largely empty for one leg of the route. We will continue to monitor this with the CAA, which publishes regular data detailing load factors at UK airports.
R2022-050	Continue innovation and funding for aircraft efficiency measures, hybrid, full electric and hydrogen aircraft development and airspace modernisation. **Primary responsibility**: DfT	We are supporting the development of zero emission technology through the Aerospace Technology Institute programme. Government has co-invested £119 million into the development of new zero emission aircraft technology. In the past year, we have also co-invested £147 million into cross-cutting and enabling technologies that underpin ultra-efficient

#	Recommendation	Response
		and zero-emission aircraft opportunities. Government provides £125 million (matched by £175 million from industry) of support for Innovate UK's Future Flight Challenge, supporting demonstration of sub-regional electric and hydrogen air services. 17 successful projects were announced in July 2022, sharing £73 million of funding to develop and demonstrate integrated aviation systems and new vehicle technologies. £4.2 million of government funding supported the Zero Emission Flight Infrastructure Project which considered airport updates required to successfully handle hydrogen-powered aircraft. Government provided £9.2 million of funding to the Airspace Modernisation Programme however this was on an exceptional basis to aid pandemic recovery and airport sponsors of the programme should resume responsibility for future funding.
R2022-051	Continue innovation and show support for sustainable aviation fuel technologies, including research into non-CO2 effects. Also, estimate the impact of different sustainable aviation fuel options on other countries' emissions and the opportunity costs for UK land use. **Primary responsibility**: DfT	We are supporting innovation through the Advanced Fuels Fund (AFF) which funds development of first-of-a-kind Sustainable Aviation Fuel (SAF) production plants towards commercial scale. AFF has supported five projects so far and the winners of the second round of funding will be announced in September 2023. We will also support testing and approval of emerging SAF pathways through a UK Clearing House. We are supporting the first transatlantic flight using 100% SAF, which will gather evidence on non-CO2 impacts. We are also scoping a research programme on non-CO2 impacts of aviation, with SAF being a key area of exploration. The SAF mandate will only support fuels that deliver the greatest greenhouse gas savings and have the least indirect impacts. This will ensure our policies have limited sustainability

#	Recommendation	Response
		risks domestically and globally. The Government is working through ICAO to encourage the most stringent sustainability criteria in CORSIA, to mitigate global SAF sustainability risks.
R2022-053	Start monitoring non-CO2 effects of aviation - including through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for eligible aeroplane operators - and set a minimum goal of no further additional warming after 2050 from non-CO2 effects, research mitigation options and consider how best to tackle non-CO2 effects alongside UK climate targets without increasing CO2 emissions. **Primary responsibility**: DfT	The Government is committed to improving our understanding of aviation's non-CO2 impacts, including identifying and developing potential mitigation options. In July 2023, we launched Expressions of Interest for two Department for Transport funded research projects on non-CO2, which will feed into a wider multi-year research programme in collaboration with academia and industry partners. We will explore the feasibility and appropriateness of incorporating non-CO2 impacts of aviation in the UK ETS, including how they could be monitored under the scheme. As the evidence develops, we will also support the consideration of appropriate international measures to address non-CO2 impacts, working through ICAO.
R2022-054	Use the ICAO General Assembly to protect, strengthen and extend Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) such that all residual emissions in 2050 are covered by near-permanent, sustainable greenhouse gas removals. Commit to increasing the number of airlines opting in and, if strengthening it is not possible, push for an additional policy for countries willing and able to commit to a higher standard of carbon removal for aviation than exists through CORSIA. **Primary responsibility**: DfT	At ICAO's 41st Assembly in 2022, the UK played a leading role in negotiating a new global goal for international aviation of net zero CO2 emissions by 2050. Aligning with the Paris Agreement temperature goal, this sets direction for national and international policy, attracts green investment, and creates a platform for agreeing further international measures. We share the CCC's view that, by 2050, the sector's residual emissions should be compensated for by robust greenhouse gas removals. CORSIA provides an established mechanism through which this could be achieved. The UK also helped secure a new agreement on CORSIA, meaning airlines will begin offsetting emissions from flights between 125 countries from 2024. This bolsters global support whilst maintaining the environmental integrity of the scheme. We believe it is paramount to sustain momentum behind CORSIA and will use

#	Recommendation	Response
		its Periodic Reviews to improve its operation and strengthen ambition over time.
R2022-056	Without allowing it to delay the implementation of the Sustainable Aviation Fuel Mandate, consider whether including high-quality greenhouse gas removals into the mandate could be a more effective way of reducing emissions for the industry, particularly in the short term (e.g. up to 2030), before more scalable forms of SAF (e.g. synthetic fuels) are widely commercially available. **Primary responsibility**: DfT	Government is supporting the adoption of Greenhouse Gas Removals (GGRs) technologies and invested £100 million into research for Direct Air Capture and other GGRs. Further we have committed to explore the part that UK Emission Trading Scheme could play as a market for GGRs to stimulate investment. This will be the subject of future consultation. These powers do not allow the government to obligate or provide certificates for the use of GGR technologies alone. Government is supporting the adoption of GGR technologies, including £20 billion into research and innovation for Carbon Capture, Usage and Storage (CCUS) in addition to the £100 million already invested into research for Direct Air Capture and other GGRs. The CCUS funding will support the clusters target for 2030. Further we have committed to explore the part that UK ETS could play as a market for GGRs to stimulate investment. This will be the subject of future consultation.
R2022-057	Demand-mitigation measures should be used to address price imbalances between aviation and low-emission forms of surface transport (e.g. rail travel). Taxes should send clearer signals to consumers on the high emissions cost of flying (e.g. by reversing the 2021 cut in Air Passenger Duty). Fair funding mechanisms should be used to ensure alternatives are affordable (e.g. invest in low-emission alternatives for journeys where domestic flights are faster/cheaper than surface transport).	The Government is opposed to creating new taxes to discourage flying and taking holidays, as laid out in the Prime Minister's speech on 20th September. The *Jet Zero Strategy* sets out detail on how the aviation sector, even if returning to a pre COVID-19 demand trajectory, can achieve net zero without the Government needing to intervene directly to limit aviation growth. DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits. The Government has committed

#	Recommendation	Response
	Primary responsibility: HMT	to reviewing its approach every five years in the *Jet Zero Strategy* to reflect the latest developments.
R2022-058	Fiscal policy should be used (e.g. taxation, quotas or a frequent flyer levy), alongside improvements in broadband, to embed positive behaviours that have arisen during the pandemic, replacing business travel with videoconferencing and online collaboration. The price of flying should be raised to the point that it acts as an effective signal to consumers that aviation has high emissions costs. **Primary responsibility**: HMT	The Government is opposed to creating new taxes to discourage flying and taking holidays, as laid out in the Prime Minister's speech on 20th September. Air Passenger Duty is an existing tax on the aviation sector. Its primary objective is to ensure that airlines make a fair contribution to the public finances. The distance band structure ensures that those who travel furthest, and thus have a greater impact on the environment, incur a greater tax liability. The UK's Emissions Trading Scheme (ETS) also covers participants from the aviation sector. It sets a total annual cap on greenhouse gases emitted by the sector, and covers domestic flights within the UK and flights from the UK to the EEA, Switzerland, and Gibraltar. More broadly, the *Jet Zero Strategy* sets out detail on how the aviation sector can achieve net zero without the Government intervening directly to limit aviation growth. DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits.
R2022-063	Reform energy markets to ensure that heat pumps are cheaper to run than gas boilers, through removing market distortions (whereby policy costs are primarily added to electricity bills), reviewing the scope of carbon pricing, and wider improvements to pricing mechanisms in the electricity market. Ensure that distributional	The Government understands that green, lower-carbon products such as heat pumps can be more efficient and cheaper to run. However, current distortions in electricity and gas prices do not always make this the case. In *Powering Up Britain* published in March 2023, the Government accepted the recommendation from the Independent Review of Net Zero that government should

#	Recommendation	Response
	impacts of reforms are carefully considered and appropriately addressed. **Primary responsibility**: DESNZ	commit to outlining a clear approach to gas and electricity price rebalancing by the end of 2023/24 and should make significant progress affecting relative prices by the end of 2024. We are working to develop our approach to rebalancing to meet these commitments and will provide further information in the coming year. Any rebalancing actions will take into account recent and future changes in the price of energy. We remain committed to working with industry to keep costs down and making sure energy prices are fair and affordable while incentivising consumers towards sustainable choices in line with our net zero ambitions. At Autumn Statement 2022, the Chancellor also announced that the government will engage with industry and conduct a review of the Carbon Price Support beyond the rates announced to 2024-25. More widely, the Review of the Electricity Market Arrangements (REMA) programme is a major review into Britain's electricity market design that will enhance energy security and help to deliver our world-leading climate targets whilst ensuring a fair deal for consumers.
R2022-065	Develop and publish new policies (with a clear implementation timeline) to ensure that owner-occupied homes reach a minimum energy performance of EPC C by 2035, through incentives or regulation. This should go beyond voluntary standards for mortgage lenders, and could include requirements at the point of sale, tax	The Government remains committed to decarbonising as many homes as possible, where practical, cost-effective and affordable. However, as the Prime Minister set out in his speech on net zero on 20 September, we have ruled out regulatory measures that would impose significant costs on hard-pressed families.

#	Recommendation	Response
	incentives, and/or a mandatory standards for mortgage lenders. **Primary responsibility**: DESNZ	We are exploring opportunities to improve the energy performance of homes in the owner-occupier sector and plan to gather further evidence on how to achieve this in a way that is fair, proportionate and affordable for homeowners via a consultation by the end of 2023. We have already consulted on incentivising mortgage lenders to help homeowners to improve their energy performance and are carefully considering the responses received to refine the policy. We will publish our response to the consultation by the end of 2023.
R2022-066	Increase the multi-year funding commitments for decarbonisation in public buildings up until 2025 to match the Government's ambition for public-sector decarbonisation and commit to continuing similar levels of funding beyond 2025. **Primary responsibility**: HMT	For the 2021 Spending Review, HM Treasury announced a larger commitment (£1.425 billion) for the Public Sector Decarbonisation Scheme (PSDS) over a three-year period and offered Grant Recipients greater delivery flexibility through the provision of multi-year grants. In addition to this settlement, HM Treasury has granted an additional year of funding for 2025/26 (announced by Department for Energy Security and Net Zero in July), increasing the overall value of available funding for projects starting in 2024/25 (Phase 3c) and enabling projects to deliver across two financial years. HM Treasury recognises the benefits of funding certainty to facilitate delivery and supply chain capacity. At the Autumn Statement, the Chancellor confirmed £6 billion of funding will be made available from 2025 to 2028 for industrial decarbonisation, clean heat and improving energy efficiency in buildings, providing certainty to the sector.
R2022-069	Monitor and publish data on the reach and effectiveness of the Government's energy advice service, ensuring the information offer to households on required changes to	The Department will monitor the ongoing functionality of the digital service, using that data to continually improve the offer

#	Recommendation	Response
	their homes is continuously improved in line with these findings, and results in genuine carbon savings. **Primary responsibility**: DESNZ	to consumers. We will keep under review the need to make of any of that data public.
R2022-070	Clearly set out how plans to grow and upskill the workforce will support the Government's pathways for low-carbon heat and energy efficiency and fill the skills gap identified in the Heat and Buildings Strategy. **Primary responsibility**: DESNZ	In *Powering Up Britain: Net Zero Growth Plan* we committed to publishing a Net Zero and Nature Work Force Action Plan in 2024. This will outline the headline actions being progressed to deliver the skills needed within the UK workforce to deliver net zero, including on low carbon heat and energy efficiency. Government is already investing significantly in skills to support the buildings retrofit supply chain, with £15 million invested since 2020 and further funding committed through the Home Decarbonisation Skills Competition (£8.85 million in 2023/24), the Heat Training Grant (£5 million from 2023-2025) and regional net zero buildings supply chain pilots. Department for Education has allocated an additional £3.8 billion to support green skills, including retrofit construction skills and low carbon heating, through apprenticeships, T levels and Skills Bootcamps. The Low Carbon Heating Technician apprenticeship is now approved for delivery and occupational standards are being developed to support apprenticeships and T-levels in insulation and retrofit coordination.
R2022-074	Set a long-term regulatory standard for social homes to reach EPC C by 2028 and finalise policy plans and a delivery mechanism. **Primary responsibility**: DESNZ	The Government has committed to consult on energy efficiency in the Social Rented Sector within 6 months of the Social Housing Regulation Act receiving its Royal Assent on 20th July 2023. Officials are already working on proposals for the consultation, which will ensure that social housing providers and social housing tenants have an opportunity to

#	Recommendation	Response
		give their views on the appropriate level & timing before any regulatory standard is set.
R2022-075	Develop and consult on policies for delivering energy efficiency and low-carbon heat in owner-occupied commercial buildings, including proposals to require a minimum EPC rating. **Primary responsibility**: DESNZ	The Government is currently developing policy options on policies to drive energy efficiency in owner-occupier properties with the aim of consulting in due course. We are building relationships with commercial building owners to understand implications, pathways to support decarbonisation. The Government needs to have sufficient opportunity to reflect the changing policy landscape into policy design. It is our intention to reflect on the valuable feedback to ensure any policy is fair and proportionate for businesses and property owners.
R2022-076	Implement the performance-based rating scheme for offices and publish timelines for other building types, outlining how timelines correspond to the expected emissions reduction trajectory of commercial buildings in the 2020s. **Primary responsibility**: DESNZ	At present, the Government has paused the rollout of the operational energy rating pilot scheme. The Government remains interested in exploring how to incorporate operational energy use within government policy. However, prior to committing to a pilot, the Government is reviewing how this scheme would function within the policy landscape for commercial and industrial buildings.
R2022-077	Develop plans to encourage SMEs to invest in energy efficiency measures, building on the Government's call for evidence, commissioned research, and BASEE programme. Publish the evaluation of the BASEE programme and funded projects. **Primary responsibility**: DESNZ	*Powering Up Britain*, published March 2023, included plans for a dedicated digital energy advice service for SMEs and for a pilot offering subsidised energy assessments and grants for energy efficiency measures. The Government has completed the evaluation of the Boosting Access for SMEs to Energy Efficiency competition (BASEE) and will be publishing the outcomes later this year.

#	Recommendation	Response
R2022-078	Ensure adequate targets and public funding commitments for decarbonisation in fuel-poor homes, to reduce energy bills and help meet climate targets. **Primary responsibility**: DESNZ	Energy efficiency is considered the best way to tackle fuel poverty in the long term. The fuel poverty target in England is to ensure as many fuel poor homes as is reasonably practicable achieve an energy efficiency rating of band C by 2030. Targeted support is currently being delivered through a range of schemes including the Energy Company Obligation, the Social Housing Decarbonisation Fund and the Home Upgrade Grant. Decarbonisation measures include insulation and low carbon heating. The Department for Energy Security and Net Zero is currently reviewing the existing fuel poverty strategy for England, Sustainable Warmth, published in February 2021. This review is to assess delivery against the strategy to date, with a view to consulting on a range of topics to inform an updated strategy. This revised strategy aims to consider delivery up to the 2030 target.
R2022-079	Implement legislation for heat network zoning in England and Wales this parliamentary session and provide Ofgem with powers to regulate heat networks. **Primary responsibility**: DESNZ	The Government introduced the Energy Bill in July 2022. The Bill will appoint Ofgem as the heat networks regulator for Great Britain and provide the Government and Ofgem with powers to make regulations about heat networks. This includes provisions for fair prices and transparent information for consumers, a high quality of service, minimum technical standards and limits on carbon emissions. The Bill will also provide the Government with powers to make regulations to implement heat network zoning in England. Zoning involves central and local government working together with industry and local stakeholders to identify and designate areas within which heat networks are expected to be the lowest cost solution for decarbonising heat. Additional requirements in zones, including requirements on certain categories of building to connect to heat networks, will help overcome barriers to

#	Recommendation	Response
		deployment that the heat network market currently faces and help deliver growth in the sector.
R2022-080	Publish plans to improve the targeting of support for fuel poor households to retrofit their homes, including through clear steps and timelines to facilitate data sharing between Government departments. **Primary responsibility**: DESNZ	The Department for Energy Security and Net Zero is currently reviewing the existing fuel poverty strategy for England, *Sustainable Warmth*, published in February 2021. This review is to assess delivery against the strategy to date, with a view to consulting on a range of topics to inform an updated strategy. This revised strategy aims to consider delivery up to the 2030 target. Targeting low-income households living in low energy efficiency properties is important in delivering support to those most vulnerable to living in a cold home. We continue to explore opportunities for data sharing, whilst ensuring data protection, to enable better targeting of fuel poor households. The targeting of both energy efficiency support and financial support will be considered as part of the review of the existing strategy and revised strategy. As part of a fair transition to net zero it is important to consider how households in different circumstances, including those living in fuel poverty, will be supported.
R2022-081	Publish targets for low-carbon heat networks which explicitly set out their contribution to decarbonising heat, outline plans for converting existing heat networks to low-carbon, and ensure that new heat networks are low-carbon from the start. **Primary responsibility**: DESNZ	The Government agrees with the need to clarify with industry the ambition for heat networks and will publish a Heat Networks Strategy in 2024 including targets for low-carbon heat networks. The Government's ambition is for all future heat networks to be low carbon. We have already consulted on future market regulation and reduction of carbon emissions, and this has positive industry support. In early 2024, Government will consult on decarbonisation as part of our heat network zoning policy. The Government currently has a consultation out on

#	Recommendation	Response
		carbon limits within heat network zones, anticipated to conclude in early 2024. The Department, through our Heat Network Transformation Programme, is providing grant support for new low-carbon networks as well as the decarbonisation existing networks. This support for low carbon networks will continue through various routes, including but not limited to implementation of zoning policy and development of market regulations.
R2022-082	Publish a monitoring framework for tracking delivery of the *Heat and Buildings Strategy,* setting out how key indicators of progress will be tracked and published. Indicators should include forward tracking of supply chain build-up in key areas, including heat pumps, heat networks, and energy efficiency. **Primary responsibility**: DESNZ	We will continue to develop and publish a suitable level of monitoring framework at scheme level and portfolio level as appropriate by Autumn 2024.
R2022-087	Ensure that public-sector organisations (including those not captured by Greening Government Commitments) have the resources required to reduce energy use and emissions from their buildings in line with Government targets. Monitor progress across the public sector, enabling organisations which are underperforming to be identified and put measures in place to help those organisations which are failing to meet targets. **Primary responsibility**: CO & No.10	The Public Sector Decarbonisation Scheme is providing £2.5 billion between 2020/21 and 2025/26 to public sector organisations in England (or where it is a reserved policy area) to fund heat decarbonisation and energy efficiency measures to reduce buildings emissions. Other measures seek to strengthen sectoral capacity and capability through the Public Sector Low Carbon Skills Fund, the Public Sector Decarbonisation Guidance produced by the Energy Systems Catapult, building on the Modern Energy Partners programme, and tools including the Government Property Function's Net Zero Estate Playbook.

#	Recommendation	Response
		The Government has committed to publishing guidance to support organisations to monitor, report, and take control of their own emissions, and will shortly publish a timeline for this, setting out the next steps for this work. In terms of monitoring progress across the whole of the public sector, the Greenhouse Gas Inventory provides robust evidence on public sector progress. The public sector is large and heterogenous and it would not be proportionate to centrally monitor emissions from each organisation on an individual basis.
R2022-092	Consult on a full technical specification for the Future Homes Standard in 2023. Ensure that the new standards are implemented by 2025, and will deliver new buildings which are resilient to climate change impacts, with ultra-high energy efficiency standards and low-carbon heating. Define clear transitional arrangements which will require any buildings which have not meaningfully commenced on site within a year of the implementation date to meet the new standards. **Primary responsibility**: DLUHC	We are considering the issues surrounding energy efficiency and overheating in homes created through a material change of use and whether changes to the Building Regulations are appropriate.
R2022-093	Ensure that Building Regulations for homes created through a material change of use to an existing building require low-carbon heating and mitigation of overheating. Consider imposing a whole-building energy and emissions standard for such homes. **Primary responsibility**: DLUHC	We intend to consult on our approach to energy efficiency and overheating in these homes as part of our consultation on the Future Homes Standard.

#	Recommendation	Response
R2022-094	Consult on a full technical specification for the Future Buildings Standard in 2023. Ensure that the new standards are implemented by 2025, and will deliver new buildings which are resilient to climate change impacts, with ultra-high energy efficiency standards and low-carbon heating. **Primary responsibility**: DLUHC	We will consult on the full technical specification for the Future Homes Standard later this year, as part of the Future Homes and Buildings Standards consultation. We will then implement the standard in 2024 and bring it into force in 2025. Homes built under the Future Homes Standard will produce on average at least 75% less CO2 than those built to 2013 standards, increasing as the electricity grid decarbonises. They will use low carbon heat, ensuring they are better for the environment and play their part in reaching our 2050 net zero target. In combination with recent improvements to standards for ventilation and overheating, new homes will be more resilient to climate impacts, including being warmer in winter and cooler in summer.
R2022-095	Implement improvements to the Standard Assessment Procedure (SAP) and Reduced Data SAP (RdSAP) methodologies to ensure they accurately model performance, drive deployment of the necessary energy efficiency and low-carbon heat measures, and also address overheating, ventilation, and moisture-risk. This should be done in coordination with Devolved Administrations. **Primary responsibility**: DESNZ	The Government is committed to making the Standard Assessment Procedure (SAP) more accurate, robust, and fit for purpose to support net zero. In 2021, the Government appointed a consortium of experts to develop a replacement for SAP. We will launch a consultation on the new methodology, which will be implemented alongside the Future Homes Standard in 2025 and through planned reforms to Energy Performance Certificates aimed at further empowering consumers. The Devolved Administrations have been involved in the development of this new methodology and will determine whether they use a version of it for their own purposes in future.
R2022-096	Publish plans to enhance compliance with Building Regulations and minimum EPC requirements, including consideration of additional measures to monitor compliance of competent persons, approved inspectors, EPC assessors and landlords, and providing local	The Government remains committed to its aspiration set out in the *Clean Growth Strategy* to upgrade as many homes as possible to EPC Band C by 2035, where practical, cost-effective, and affordable. The introduction of the Building Safety Act 2022 improves building control sector standards by

#	Recommendation	Response
	authorities with sufficient resources to monitor and enforce compliance with standards. **Primary responsibility**: DLUHC	establishing a unified building control profession overseen by the Building Safety Regulator. Changes are being made to who can advise on and carry out building control work, competence requirements will be harmonised for local authority building control and approved inspectors, with a new oversight regime, and a duty on people to take reasonable steps to ensure anyone they appoint to carry out design or building work meet the competence requirements. The Government ran an enforcement funding competition between 2018 and 2023, which saw a total of 104 Local Authorities engaged and £8.4 million being allocated. We intend to consult on reforms to EPCs in the months ahead.
R2022-106	Recognising that the transition needs to scale up over this decade and that stable funding provides certainty to households, businesses, and public bodies, strongly and credibly signal that the Boiler Upgrade Scheme, Home Upgrade Grant, Local Authority Delivery Scheme, Social Housing Decarbonisation Fund, Energy Company Obligation and public sector decarbonisation will continue to be fully funded as required beyond the spending review period. **Primary responsibility**: HMT	HM Treasury recognises the benefits of certainty of funding to facilitate delivery and supply chain capacity. At the Autumn Statement, the Chancellor confirmed £6 billion of funding will be made available for clean heat and improving energy efficiency in buildings from 2025 to 2028, providing certainty to the sector. The Department for Energy Security and Net Zero is working towards allocating this funding.
R2022-107	Outline a comprehensive vision to leverage private financing for the retrofit of UK homes and businesses. Plans should be designed to operate in tandem with the other enablers needed to unlock home retrofit at scale, such as better buildings data and public engagement. Financial levers to consider include green stamp duty, green mortgages, energy as a service, property-linked	Catalysing the market for Green Finance is a priority for Government to help support homeowners not eligible for grants with the upfront costs of improvement. While the availability and design of mortgages is a commercial decision for lenders in which the Government does not seek to intervene, there are now over 50 green mortgage products on the market. The Government is investing up to £20 million in the Green Home

#	Recommendation	Response
	finance, and using the UKIB to de-risk retail investment into home retrofit. **Primary responsibility**: HMT	Finance Accelerator Programme, to support the development of innovative finance products and services for homeowners. This follows the £1.8 million Green Home Finance Innovation Fund, which was a key early step in supporting the lending community to design, develop and pilot green finance products for homeowners.
R2022-108	Publish the Decarbonising Heat Consultation and follow on with a coherent, long-term strategy for heat and energy efficiency in Northern Ireland's homes and other buildings; encompassing regulatory, policy and funding commitments to facilitate delivery. **Primary responsibility**: Northern Ireland	A consultation will be published in 2023, to develop proposals for the future of low carbon heat support to assist the transition from fossil fuels to decarbonised forms of heating that will be required to meet emission reduction targets as set out in the Climate Change Act (Northern Ireland) 2022. A Statement of Intent and Cross-Departmental Consultation will be issued in 2023 to seek feedback on a range of evidence-based options presented on a multi-year Energy Efficiency Programme. This will follow a period of engagement with a range of stakeholders and will set a statement of intent to local industry. The Department for Economy also intend to launch a business energy efficiency support scheme and will continue on the delivery of the Energy Management Strategy for Central Government.
R2022-112	Develop and implement plans to make all public sector buildings and vehicle fleets within the department's remit zero-carbon in the long term, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032. **Primary responsibility**: DLUHC	DLUHC has signed up to achieving an ambitious 44% reduction in its carbon emissions by 2025 when measured against a 2017 baseline as part of its Greening Government Commitments. This includes emission reductions from both buildings and fleet vehicles. 20% of these emission reductions are to be direct emissions.

#	Recommendation	Response
R2022-113	Publish the completed carbon and water management plan and the sustainability management plan that is under development. The plan should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032. **Primary responsibility**: DWP	The Department for Work and Pensions (DWP) has now published a high-level version of its *Carbon and Water and Sustainability Management Plans* in 2023. These set out our proposals to reduce DWP's environmental impact on its estate to meet the 2024/25 Greening Government Commitments (GGC) targets, and the longer-term Net Zero Carbon requirement. The published summary can be found here: https://www.gov.uk/government/news/dwp-estates-outlines-sustainability-plans
R2022-114	Building on findings from the Home Office's studies into Net Zero technologies and EV chargepoints, publish a Net Zero carbon strategy for the Home Office. The strategy should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032. **Primary responsibility**: HO	The Home Office has clear pathways for reaching Greening Government Commitment targets, switching to ultra-low emissions vehicles and reducing emissions from buildings As well as covering our plans to reduce the impact of our estate, travel, ICT and suppliers on the environment and to achieve GGC and other targets, the department also addresses climate change adaptation. The estates and fleet plans summarised within the strategy build on previous findings.
R2022-115	Develop and implement plans to make all public sector buildings and vehicle fleets within the department's remit zero-carbon in the long term, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032. **Primary responsibility**: MoD	At end of FY22/23 MOD had reduced the built estate emission by 30% against a FY17/18 baseline and 27% of MOD white fleet cars were Ultra Low Emissions Vehicles (ULEV). However, Defence's energy consumption and its emissions are generated from more than just its buildings and its white fleet. Hence, work is underway across the Defence enterprise looking at emission reduction activity across areas such as maritime and aviation. Estate emissions including those from wider land use remain a priority as well as updating our policies and standards to ensure that they are informed by both climate mitigation and adaptation considerations. The pace at

#	Recommendation	Response
		which defence can decarbonise will remain intrinsically linked to the preservation of military capability and maintaining UK security.
R2022-116	Publish MoJ's Net Zero Carbon Strategy. The strategy should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032. **Primary responsibility**: MoJ	The Ministry of Justice has drafted a net zero strategy focusing on scope 1 and 2 emissions from our estate and fleet to help achieve our medium term and long term net zero targets for 2050. We aim to publish this strategy later this year.
R2022-118	The Local Net Zero Forum, through its 'roles and responsibilities' subgroup, should develop an agreed framework setting out what aspects of Net Zero central and local government are responsible for and how these will be coordinated. This should be circulated around local authorities and other relevant stakeholders to enable input from those not involved with the Forum. **Primary responsibility**: DESNZ	The Local Net Zero Forum has considered taking forward discussions on a framework for Local Authority net zero roles and responsibilities but this was not considered to be the best way forward. There were several reasons for this including the variety of local authority types and responsibilities, the fact that local authorities have significant autonomy in how they carry out their functions, concerns that such an approach could limit ambition and the fact that this is an evolving, rather than static, issue as local authorities develop their approaches to net zero.
R2022-130	Embed participatory and deliberative methods in the Net Zero policy-making process, where appropriate, as a means of improving the design of, the acceptability of, and public support for, new policies. Embed key pillars of behavioural science into policies that make green choices easier, ensuring these methods are coordinated across departments. **Primary responsibility**: DESNZ	The Government continues to regularly run or fund deliberative dialogues on a range of net zero issues to help inform policies. For example, in 2022, Government ran a public dialogue on biomass and bioenergy with carbon capture and storage to inform the 2023 *Biomass Strategy*, and a public dialogue on net zero to inform the Net Zero Society Foresight project. In November 2021, Defra launched a Strategic Qualitative Panel to inform its strategic priorities. Policy teams across several government departments embed behavioural science functions in their policy work and use government's published toolkits

#	Recommendation	Response
		and frameworks. The Department for Energy Security and Net Zero's Energy & Climate Change Behavioural Science Framework can be used to rapidly commission small-scale behavioural science research projects. To ensure standards are met, all behavioural science functions follow Cabinet Office's guidance on Government Social Research Ethical Assurance for Social and Behavioural Research and are bound by independent professional standards.
R2022-132	Ensure that public bodies with a role in delivering Net Zero have a clear duty to facilitate this and work together. This should apply, for example, to Ofgem and the Future System Operator. **Primary responsibility**: DESNZ	Government has introduced legislation, as part of the Energy Bill, to establish the Future System Operator (referred to as the Independent System Operator and Planner or ISOP in legislation). As set out in the Energy Bill, the FSO will be required to carry out its functions in the way that it considers is best calculated to promote the objective of ensuring security of gas and electricity supply, meeting our statutory decarbonisation targets (including net zero) and promoting a coordinated, efficient and economical energy system for electricity and gas. The Government has made proposals for the modification of Ofgem's existing duties via the Energy Bill to include a specific reference to the net zero targets and five-year carbon budgets in the Climate Change Act 2008. This move reaffirms government's commitment and mandate in achieving our net zero targets and ensures that Ofgem's role in net zero in clear. Ofgem will be required to consider, as part of the everyday decisions they make as the regulator, how their decisions promote the net zero objective. The role of Ofgem in net zero, and the institutional responsibilities of FSO, Ofgem and ministers, including in ensuring strategic investment in the energy sector, will be

#	Recommendation	Response
		clarified as part of ongoing work on the development of the Strategy and Policy Statement for Energy Policy in Great Britain.
R2022-139	Publish a public engagement strategy that sets out a clear long-term vision of how to engage people and businesses in delivering Net Zero and climate change adaptation, with the aim to develop and maintain support for Net Zero policies, especially where these require a high pace of change and/or highly visible technological change. It should include public communications plans to inform key audiences about the important changes required to deliver Net Zero and adapt to climate change, building understanding of the associated timelines, benefits (including co-benefits) and costs, and impacts on fairness and accessibility. Communications should be designed with the UK's diverse communities in mind. **Primary responsibility**: DESNZ	The *Net Zero Growth Plan* sets out that we will be developing a Public Engagement Framework and a Net Zero Roadmap, in conjunction with partners and trusted messengers. The Department for Energy Security and Net Zero (DESNZ) has worked with the Broadway Initiative and the international SME Climate Hub to refresh the content on the UK Business Climate Hub. It is now a single 'one stop shop' service where SMEs can access new advice and support with reducing their emissions while saving on their energy bills. Meanwhile, Defra's third *National Adaptation Programme* commits to increase climate adaptation information and guidance for businesses, including the use of the UK Business Climate Hub to host climate risk factsheets. DESNZs' communications team works alongside policy experts to deliver important changes, such as the Energy Retrofit Tool and the 'It All Adds Up' campaign, both launched to help improve home energy performance.
R2022-140	Publish the Terms of Reference and membership list for the Local Net Zero Forum. **Primary responsibility**: DESNZ	The Terms of Reference and membership organisation list for the Local Net Zero Forum will be published on GOV.UK in due course.
R2022-143	Ensure that all policies, funding and delivery mechanisms are properly aligned to the pace of transition required and work together constructively towards Net Zero, for example through introduction of a Net Zero test.	The Government has gone further than ever before to ensure climate is at the heart of our decision-making. The Department for Energy Security and Net Zero means there is a department dedicated to delivering on our climate ambitions and a senior ministerial representation at the Cabinet table, whose primary focus, alongside energy security, is driving delivery of net zero

#	Recommendation	Response
	Primary responsibility: CO & No.10	and maximising the economic opportunity the transition presents. The Department aligns with our Cabinet committee structures, where the Domestic and Economic Affairs (Energy, Climate and Net Zero) committee ensures a coordinated approach to delivering net zero across government. Net zero is one of the few policy areas to have a dedicated Cabinet forum, demonstrating the importance of achieving climate targets. This Cabinet-level governance is supported by strategic governance fora. These structures work together to ensure government is taking coordinated action across departments and making decisions consistent with its long-term policy ambitions.
R2022-144	Extend the delivery of climate skills training across the Civil Service, wider public sector and local authorities. Consider what wider supporting skills (e.g. delivery, coordination, legal, financial) will be needed in the public sector to enable effective delivery of the transition to Net Zero and climate risk management. **Primary responsibility**: CO & No.10	The *Net Zero Strategy* recognises the importance of the Civil Service having the right skills to deliver net zero. It sets out a series of measures, including a new training offer available to all civil servants which has already been developed. Other measures include expanding training for Fast Streamers on net zero, which enters its second year, and embedding net zero in the standards for the Policy Profession, for the first time explicitly recognising that good policy making requires an understanding of the climate impacts of decisions. The cross-government Policy Profession Unit have also recruited a post to lead on embedding climate and environment training into the policy profession. The Department for Energy Security and Net Zero have also paid for Carbon Literacy courses to be developed for the Public Sector more widely. The courses are now available for organisations including NHS, Local Government, Central Government, Blue Light services, and Universities.

#	Recommendation	Response
		Organisations need to pay for their accreditation and can tailor courses as they see fit.
R2022-157	The Government should increase investment in, and improve the collection and reporting of, consumption emissions data. This should include (a) establishing a short- and medium-term strategy to improve the underlying methodology to ensure it can capture key improvements in the carbon-intensity of imports (b) ensuring the resource to enable annual emissions statistics to be produced promptly each year. **Primary responsibility**: Defra	Defra agree it is vital to understand and monitor the UK's international footprint through its consumption of goods produced outside the UK. Defra has published the UK carbon footprint since 2008. These are published as Official Statistics. They are published as promptly as possible but there is inevitably some lag in the data given this data is reliant on the production of wider data by the ONS. Defra and other government departments have joint regular dialogue with data providers, the University of Leeds, and the Office for National Statistics, to explore how the methodology and statistics can develop, both in the short and long-term. The Government is exploring what resources are required to elevate the carbon footprint to National Statistics status. Discussions with the Office for Statistics Regulation are now planned for winter 2023/24. Defra, Department for Energy Security and Net Zero and the ONS will be discussing further to determine who is best placed to own this data going forwards given its importance.
R2022-168	The Government should outline the UK's future ambitions on reducing consumption emissions. **Primary responsibility**: Defra	The UK has set ambitious emissions targets on a territorial basis, in line with the agreed international approach for reporting greenhouse gas emissions. In addition, the Government monitors the UK's consumption emissions and publishes its Carbon Footprint report on an annual basis. Monitoring of these emissions informs and enables policy development to support global decarbonisation efforts.
R2022-173	Deliver climate policy that also has health benefits, such as active travel, access to green spaces, air quality, better buildings and healthier diets. This could be done	The Government agrees that many policies that are beneficial for the environment are also of benefit to human health and routinely seeks opportunities to embed health benefits into

#	Recommendation	Response
	by reviewing ways in which DHSC public guidelines could integrate messages that strengthen and make more evident the co-benefits of good nutrition and exercise for both health and for the environment. **Primary responsibility**: DHSC	wider environmental and climate policies across government. The Department for Health and Social Care (DHSC) is taking a cross-government approach to ensure both health and climate considerations are factored into policy development, working closely with a range of government departments including Department for Environment, Food and Rural Affairs, DfT and DLUHC on important issues such as air quality, housing, active travel, access to green space and food policy, where there is the potential for both climate and health benefits .
R2022-176	Publicly commit to providing additional, ringfenced funding to NHS England to fund the entirety of the delivery of its Net Zero plan. **Primary responsibility**: DHSC	Since 2020/21, Government has provided ringfenced funding for low-carbon heating projects via the Public Sector Decarbonisation Scheme. To date, 60 NHS Trusts have received over £800 million in targeted Net Zero funding, directly supporting the aims set out in the NHS's *Net Zero Plan*. At the Autumn Statement, the Chancellor confirmed £6 billion will be made available from 2025 to 2028 for clean heat and energy efficiency of residential and non-domestic buildings. The Department for Energy Security and Net Zero is working towards allocating this funding to policy areas. Delivering the NHS's plan is also dependent upon embedding net zero within all areas of NHS investment. Capital investment reached £9.9 billion in 2022-23, and we provided £4.2 billion capital last year (22/23) for the NHS to spend on operational needs, including upgrading its estate and fleet in line with decarbonisation commitments. A further £8.4 billion will be available through to 2025.
R2022-196	Work with Government departments to fill the data gaps identified by CCC in the Monitoring Framework document accompanying this report.	ONS has relevant skills, experience and tools to offer for climate change-related data, statistics and analysis. While resources are limited, we are happy to discuss how we might be able to support - for example, addressing priority CCC data

#	Recommendation	Response
	Primary responsibility: ONS	gaps that are also priorities for the relevant department. We are in discussions with DESNZ and DfT, which also have specific data gap recommendations. We are also developing an Integrated Data Asset for Climate Change and Net Zero. This will allow dataset linkage and analysis by accredited researchers, which could potentially close data gaps and enhance analytical outputs
R2022-199	Publish a transparent and quantified link between policies and milestones, and the emissions reduction they correspond to in the sectoral pathways set out in the Second Welsh Carbon Budget. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2022-206	Identify and address potential key supply-chain bottlenecks for delivering up to 50 GW of offshore wind by 2030, including for investment in ports, adequate vessel capacity, manufacturing capability and floating wind. Take opportunities to link supply chain action to key decision points in offshore leasing and Contract for Difference auctions. **Primary responsibility**: DESNZ	The Department for Energy Security and Net Zero contracted Baringa to analyse wind supply chains and identify constraints and bottlenecks that could impact the UK's ability to deliver its renewable energy deployment ambitions. The Department is engaging with industry to develop an Industry Growth Plan, setting out supply chain priorities and opportunities and work considering port requirements for offshore wind. This also includes the Floating Wind Taskforce to tackle barriers to deployment and create the right environment for investment. In March 2023, the Department launched the Floating Offshore Wind Manufacturing Investment Scheme, worth up to £160

#	Recommendation	Response
		million to support investment in port infrastructure for floating wind. The Crown Estate will be requiring bidders to Leasing Round 5 to set out how they will reflect the important role of ports in the assembly and deployment of turbines. The Government is considering whether to introduce Non-Price Factors into the Contracts for Difference Scheme, which could further incentivise supply chain development.
R2022-209	Publish plans for monitoring, reporting and verification systems for engineered removals, noting the recommendations of the 2021 Task & Finish Group report and responses to the consultation on business models. **Primary responsibility**: DESNZ	The Government is committed to ensuring that Greenhouse Gas Removals (GGRs) provide measurable and verifiable removals of CO2 from the atmosphere. As part of the GGR Business model consultation response, the Department for Energy Security and Net Zero set out the principles that will guide our approach to monitoring, reporting and verification (MRV) of GGR technologies. The GGR Business Model Consultation response also confirmed our criteria for defining a robust 'negative emission' and noted that Government have commissioned a review of the existing landscape of GGR standards, conducted by E4 Tech and Element Energy.
R2022-210	Take legislative steps to allow for engineered removals to count towards achievement of UK carbon budgets. **Primary responsibility**: DESNZ	The Government has acted on our commitment to seek an amendment to the Climate Change Act (CCA) to enable engineered removals to contribute to UK carbon budgets by including a clause in the Energy Bill that seeks to broaden the definition of 'removals' of greenhouse gases beyond nature-based GGRs to include engineered GGRs.

#	Recommendation	Response
R2022-211	Work with the Interministerial Group for Net Zero, Energy and Climate Change to publish a joint position on the contribution of engineered removals and CCS to meeting UK-wide and DA targets to 2030. **Primary responsibility**: DESNZ	The Government is committed to further development of Carbon Capture, Usage and Storage (CCUS) through the Track-2 process which will establish 2 new clusters. We will set out the process by which capture projects for Track-2 will be selected in due course. We will also launch a process later this year to enable further expansion of the Track-1 clusters, beyond the initial deployment.
R2022-212	For the review of the F-gas Regulation happening this year, match or exceed any increase in ambition in EU F-gas Regulation, which is currently being reviewed. **Primary responsibility**: Defra	UK, Scottish and Welsh Governments are reviewing the F-gas Regulation. This is being done in two stages. The first stage was completed in December 2022 with the publication of an assessment report. The report looks primarily at the impact of the current regulation and current market circumstances. The second stage will involve launch of a public consultation on future policy proposals which will seek to identify F-gas measures that will help meet the UK's net zero target.
R2022-213	Pass legislation to reduce hydrofluorocarbon consumption by 85% by 2036 relative to 2011-2013. **Primary responsibility**: Defra	The UK is committed to meeting its obligations under the Kigali Amendment to the Montreal Protocol by reducing hydrofluorocarbon (HFC) consumption by 85% by 2036. The UK's net zero objective means proposals in our planned consultation on changes to the F-gas Regulation will need to be ambitious, including considering going beyond the Kigali target. The existing F-gas Regulation will reduce HFC placed for the first time on the market by 79% by 2030, compared to a 2015-2019 baseline. Defra are exploring options around primary powers for use to then lay secondary legislation to make necessary changes to the F-gas Regulation.

#	Recommendation	Response
R2022-214	Publicly push for stronger international action on reducing F-gases under the Kigali Amendment to the Montreal Protocol, including making it compatible with reaching Net Zero greenhouse gas emissions, encouraging more countries to ratify the Protocol and the Amendment, improving international monitoring of emissions, supporting the development of more robust estimates of emission metrics, and supporting the reduction of inhaler emissions in other countries' health services. **Primary responsibility**: Defra	The UK is publicly pushing for earlier Montreal Protocol action to phase down hydrofluorocarbons (HFCs), the main group of F-gases. We are also advocating to integrate action on energy efficiency for refrigeration and air-conditioning equipment, which could double the climate benefits of the Kigali Amendment in line with Paris Agreement and net zero commitments. To support these efforts, the UK aids developing countries, including for modelling of early action to reduce HFCs and projects promoting sustainable, efficient cooling and cold chains. The UK continues to call upon the international community to ratify and effectively implement the Kigali Amendment at every opportunity, including at the G7 and by seeking, where appropriate, to embed Montreal Protocol commitments into our new Free Trade Agreements. Moves by inhaler manufacturers in Europe to switch to climate friendly inhalers could lead to more of the global market taking similar action, thereby reducing emissions.
R2022-215	Publicly set targets to end the use of Metered Dose Inhalers (MDIs) for all patients where alternatives can be used, by the mid-2020s, for all NHS and private healthcare services across the four nations of the UK. For patients where MDIs are necessary, end the use of MDIs that use propellant gases with 100 year Global Warming Potentials above 200 times that of carbon dioxide. Publish a plan setting out how the Government will meet these targets.	As noted in Defra's *F-Gas Assessment Report* (Dec 2022) the use of hydrofluorocarbons (HFCs) as a propellant in MDIs is already an area of joint policy between Defra, Scottish Government and Welsh Government. Defra and the Scottish and Welsh governments are currently reviewing the F-gas regulation, including its application to Metered Dose Inhalers. Any proposals for change to the Regulation will be consulted on in due course.

#	Recommendation	Response
	Primary responsibility: DHSC	In England, the NHS remains committed to delivering a carbon footprint reduction of 4% through a shift to low carbon inhalers through its Long-Term Plan.
R2022-216	Publish targets for the roll-out from now until 2037 of heat pumps that do not use F-gases as a refrigerant and set out how the Government plans to meet these targets. **Primary responsibility**: DESNZ	As outlined in the Government's *Carbon Budget Delivery Plan*, we expect the total number of heat pump installations to grow from 0.9 million in 2025 to between 3.6-3.8 million in 2030 and 7.1-11.5 million in 2035. In line with the current phase down of hydrofluorocarbons (HFCs), commonly used as refrigerants in heat pumps and air conditioning systems, we expect the use of HFCs with a high global warming potential to steadily fall over the next decade and be replaced by alternatives, including natural refrigerants, with a much lower global warming impact. The current target is to reduce the CO2 equivalent of HFCs brought into the market to 21 per cent of the baseline by 2030. Subject to agreements between UK, Scottish and Welsh Governments, a joint consultation on proposals for further action will be published in due course.
R2022-221	Continue to take a global lead on further developing and improving UK and international biomass governance and sustainability criteria. **Primary responsibility**: DESNZ	The recently published *Biomass Strategy* presented a series of actions Government is minded to take to strengthen the UK's biomass sustainability criteria, including the development of a cross-sectoral sustainability framework for biomass to enable greater consistency across sectors. We intend to publish a consultation on these actions in 2024. The UK sustainability criteria, which applies to domestically and internationally sourced biomass, will continue to be linked to international governance mechanisms through alignment with multilateral initiatives on biomass, international biomass related policies, certification schemes and best practices.

#	Recommendation	Response
		The Government remains committed to engaging with international stakeholders and we will continue to support intergovernmental forums and multilateral initiatives to embed strict biomass sustainability requirements for biomass use across the world, such as the G20, the work of Global Bioenergy Partnership (GBEP) and the Biofutures Platform Initiative.
R2022-222	The *Biomass Strategy* needs to set out a best-use hierarchy for biomass and address the sustainability of the biomass supply (e.g. through high sustainability standards) required to support the rapid and sustainable deployment of BECCS (for power and biofuels). The Strategy should consider reducing reliance on imports by increasing domestic biomass supply as part of wider land-use changes (including diet change). **Primary responsibility**: DESNZ	The *Biomass Strategy* sets out a priority use assessment to inform the best use of biomass over time in support of net zero, centred around a series of guiding principles and supported by analysis. The strategy also presents actions to strengthen the UK's biomass sustainability criteria and states that future government support for BECCS projects will require compliance with strict sustainability criteria. The analysis for the strategy shows that future sustainable biomass availability is uncertain, but both domestic and imported sustainable biomass supply are expected to be important in supporting biomass use across the economy. Domestic biomass cultivation and deployment will be considered in the context of the Government's *Food Strategy* commitment to maintain current levels of food production and alongside our legally binding Environment Act 2021 targets.
R2022-227	Conduct a comprehensive public engagement and consultation process on the target level and delivery of the NDC for emissions reductions to 2035 submitted in 2025. **Primary responsibility**: DESNZ	*Powering Up Britain: Net Zero Growth Plan* and the *Carbon Budget Delivery Plan* - published in March 2023 - emphasise the key role that the public will play in the transition and notes that the Government will set out further detail on how it will increase public engagement on net zero. As part of this we will consider options for engagement on the UK's 2035 NDC.

#	Recommendation	Response
R2022-229	Set out plans for reducing domestic methane emissions in line with the collective aims of the Global Methane Pledge (a reduction in UK methane emissions of at least 30% from 2020 levels by 2030) and announce an intention to set a longer-term pathway for these emissions in 2023. These plans for contributing to the Global Methane Pledge should be included in the enhanced 2030 NDC the UK resubmits in 2022 for COP27. **Primary responsibility**: DESNZ	The UK continues to progress the global commitment made under the Global Methane Pledge. Domestically, the UK has adopted early and ambitious measures to tackle methane emissions - between 1990 and 2021, UK methane emissions dropped by 62%, one of the highest reductions of any OECD country. The UK has already published a Methane Memorandum in November 2022 outlining how it will continue to implement and deliver measures across the energy, agriculture, and waste sectors to reduce methane emissions. This includes the North Sea Transition Authority implementing tougher guidance on flaring and venting, Government working with industry to improve productivity in the agriculture sector, and encouraging the collection and utilisation of methane from landfill sites. The *Carbon Budget Delivery Plan* published in March 2023 also sets out proposals and policies to enable the necessary reductions in greenhouse gas emissions to meet carbon budgets and the UK's NDC.
R2022-230	Outline governance and accountability structures for tracking progress against the 2030 NDC target and future UK NDCs, noting that the UK NDC is not in scope of the Climate Change Act (2008) and the Carbon Budgets framework and is therefore not directly accountable to Parliament. **Primary responsibility**: DESNZ	The Government is committed to delivering its international commitments, including the 2030 Nationally Determined Contribution (NDC), under the Paris Agreement. NDCs are not legally binding under the UNFCCC, but countries are held accountable through an international assessment and review process. The Government will report to the UNFCCC on progress towards meeting the 2030 NDC every two years from 2024. Governance at Cabinet committee level assesses progress against carbon budgets and the UK 2030 NDC, on the trajectory to net zero, and the Secretary of State of the

#	Recommendation	Response
		Department for Energy Security and Net Zero is accountable to Parliament for progress against the net zero target. The Greenhouse Gas Inventory (GHGI) provides annual estimates of UK emissions, produced using the best available data on activity and emission factors. The GHGI is the primary mechanism by which the UK's progress towards national mitigation targets, including the NDC, are measured. The GHGI is also the basis of the Annual Statement of Emissions to the UK Parliament, as required under the Climate Change Act.
R2022-235	Continue to deliver a broadly 50/50 split between adaptation and mitigation spend under UK International Climate Finance, looking for opportunities that advance both outcomes. **Primary responsibility**: FCDO	The UK will continue to balance our International Climate Finance (ICF) between support for mitigation and adaptation, as detailed in the *ICF3 Strategy*, published in March 2023. We will invest in mitigation where emissions are growing rapidly and in nature-rich countries that play a role as major carbon sinks to reduce future climate impacts. At the same time we will support developing countries with energy access and the most vulnerable to adapt and become more resilient. At COP27 the Prime Minister announced a tripling of UK support for adaptation from £500 million in 2019 to £1.5 billion in 2025.
R2022-236	Follow up on commitment to restore UK Official Development Assistance to 0.7% of Gross National Income once the underlying debt to GDP ratio will be falling and the UK will not be borrowing to finance day-to-day spending (now expected by the OBR in 2023/24). Do not introduce additional conditions relating to macroeconomic and fiscal uncertainty. **Primary responsibility**: HMT	The Government remains committed to returning to spending 0.7% of Gross National Income (GNI) on Official Developmental Assistance (ODA) when, on a sustainable basis, the government is not borrowing for day-to-day spending and underlying debt is falling. In accordance with the International Development (Official Development Assistance Target) Act 2015, the Government will continue to review and confirm each year whether a return to spending 0.7% of GNI on ODA is possible against the latest fiscal forecast with

#	Recommendation	Response
		spending assumed at around 0.5% of GNI until then. The next OBR fiscal forecast will be published on 22 November 2023. The UK remains a champion for international development and a leading donor. In 2022 the UK spent nearly £12.8 billion as ODA, making it the third largest G7 donor as a proportion of GNI.
R2022-237	Set out the Government's approach to domestically achieving aims of priority sectoral COP26 Pledges before COP28. **Primary responsibility**: DESNZ	Under the Breakthrough Agenda, the UK is focused on delivering 28 Priority Actions agreed at COP27. In 2021, at COP26, the UK launched the Global ZEV Declaration, committing signatories to a Paris-aligned ZEV transition where all new car and van sales are zero emission globally by 2040, and by no later than 2035 in leading markets. Under the Global Coal to Clean Power Statement the UK continues accelerating its domestic transition from coal power to clean energy. Under the Clean Energy Transition Pledge, the UK is aligning its international finance support to the clean energy transition. Under the Global Methane Pledge, the UK's Methane Memorandum sets out how we will continue to implement measures to reduce global methane emissions. On nature, the England Trees Action Plan commits to trebling tree planting in England by the end of this Parliament and we've introduced a statutory target to increase England's tree canopy and woodland cover to 16.5% by 2050.
R2022-240	Review, invest in, and initiate reform of industrial decarbonisation data collection and annual reporting to enable effective monitoring and evaluation, and policy implementation. This will require additional data collection and reporting to allow for effective tracking of energy efficiency, material efficiency, fuel switching, CCS, including progress developing these measures,	The Government is conscious that organisations report data on industrial decarbonisation through a variety of policies and programmes and recognises that costs for businesses should be proportionate. We will continue to look at options to streamline reporting and data collection - for example in developing new IT systems or in project reports and applications under grant programmes. This will build on the

#	Recommendation	Response
	and more holistic measurement on a product or whole lifecycle carbon basis. This reform should also be used as an opportunity to remove overlaps in reporting between existing schemes, which place an unnecessary burden on industry. **Primary responsibility**: DESNZ	recent consultations on non-financial reporting, carbon leakage and the Climate Change Agreements Scheme. Government is also exploring how we can use existing administrative data (principally the UK Emissions Trading Scheme and Climate Change Agreement data) to improve final energy consumption statistics. In addition, the Department for Energy Security and Net Zero is exploring how to leverage additional data on energy expenditure from existing Office of National Statistics surveys, and introducing hydrogen production reporting which we hope to extend to an understanding of hydrogen consumption in industry and other sectors.
R2022-244	Resolve the distortive disincentive against electrification of sites within the UK ETS caused by the design of Climate Change Agreement targets. **Primary responsibility**: DESNZ	The Government do not agree that the design of the Climate Change Agreements scheme causes a distortive disincentive against electrification of sites within the UK Emissions Trading Scheme (UK ETS). We recognise that sectors are involved in both schemes to varying degrees and will continue to engage with organisations from different sectors who take part in both schemes. We also note that for some organisations, only electricity is included in their Climate Change Agreements as their heat is covered by UK ETS, which will have an impact on how they interact with the schemes. The impact of the fuel split across different schemes can also be considered as part of target setting negotiations for both the Climate Change Agreements scheme extension and any potential future scheme.
R2022-246	Continue to support innovation and demonstration of fuel switching and CCS technologies for end-use in manufacturing and construction, for example through grant funding and government-backed business models.	The £1 billion Net Zero Innovation Portfolio currently funds industrial fuel switching and Carbon Capture, Usage and Storage (CCUS) grant funding programmes. There are three programmes demonstrating fuel switching to low carbon energy sources in industrial settings, including manufacturing and construction end uses; the Industrial Fuel Switching

#	Recommendation	Response
	Primary responsibility: DESNZ	programme, and sector-specific Red Diesel Replacement and Green Distilleries programmes. There are two CCUS programmes supported; the CCUS Innovation programme, which promotes the development of next generation technologies for the treatment of industrial flue gases, and the international Accelerating CCUS Technologies programme which investigates early stage emerging technologies which may be constituents of future development programmes. Any further programmes will be subject to future spending reviews.
R2022-247	Design industrial decarbonisation policies in a way that supports and creates jobs, especially in regions with reliance on industrial jobs. **Primary responsibility**: DESNZ	The *Industrial Decarbonisation Strategy* (2021) committed to both "unlock new job opportunities through deployment of low carbon infrastructure in industrial areas" and "support the skills transition so that the current and future workforce benefit from the creation of new jobs". In March 2021, the Government awarded £171 million pounds of the Industrial Decarbonisation Challenge (IDC) to nine projects located in the five industrial clusters to fund early stage design work to deploy technologies and infrastructure that will significantly reduce emissions in these industrial areas. Based on developer estimates, the successful deployment of these projects within industrial clusters not only advances government ambitions in achieving net zero but could create around 60,000 future jobs over the next 30 years for a low-carbon future. These projects are in progress and on track to complete in 2024.
R2022-249	Invest in a system (e.g. the National Materials Datahub) to track materials and products to share information on their quantity and quality for reuse and repurposing to	The 2023 Maximising Resources, Minimising Waste programme sets out plans to use data and digitalisation tools to support greater use of secondary materials and used products, as well as to increase transparency on progress

#	Recommendation	Response
	retain materials at their highest value for as long as possible. **Primary responsibility**: DESNZ	against waste reduction targets. This includes a government led review of the material data landscape and data requirements, against the backdrop of the original National Materials Datahub initiative, which will help scope strategic data needs and options for further potential government investment. Work is also progressing at pace on innovative projects that will improve data across specific material flows, including the UK Critical Minerals Intelligence Centre, the DIT Supply Chain Intelligence project, and Defra's Waste Tracking System. Cross-cutting work by the Circular Economy Hub, part of the UKRI National Interdisciplinary Circular Economy Research (NICER) programme on a data observatory, provides further case studies and insights on how investments in data can support growth in the circular economy.
R2022-250	Set out a strategy for decarbonisation of off-road mobile machinery to set direction for the private sector. The strategy should include policy proposals, which could include the future of emissions standards, and a proposal for how best local authorities can bring off-road mobile machinery into their regulatory framework for construction within urban areas. **Primary responsibility**: DESNZ	In *Powering Up Britain: Net Zero Growth Plan* (2023), the Government announced its intention to publish a non-road mobile machinery (NRMM) decarbonisation strategy with work starting in 2023. This also announced intention to publish a call for evidence on NRMM decarbonisation options this autumn, the outcomes of which will be used to inform the strategy. The Government is on track to deliver in line with those timings.
R2022-251	Publish the timber policy roadmap setting out the policies needed to substantially increase the use of wood in construction. **Primary responsibility**: Defra	The Government continues to progress plans for the Timber in Construction Roadmap. We have held five meetings of the cross-government, cross-industry timber in construction policy working group, and are planning to publish the roadmap in autumn 2023. In the *Net Zero Strategy* (2021), the Government confirmed it was exploring the potential of maximum embodied carbon

#	Recommendation	Response
		levels in new buildings. Department of Levelling Up Housing and Communities has since announced it intends to consult in 2023 on the approach to measurement and reduction of embodied carbon in new buildings.
R2022-252	Set out a plan to make an assessment of whole-life carbon and material use of public and private construction projects mandatory by 2025, to enable minimum standards to be set. The whole-life carbon assessment should be sought at the planning stage to enable efforts to reduce embodied carbon and materials. **Primary responsibility**: DLUHC	In the recent National Planning Policy Framework consultation, we asked for views on a form of carbon impact assessment. We are now considering the comments we received, including whether such measures would be effective or proportionate, and will consider policies in a way that protects and supports new development. We expect to publish an update in the autumn. The *Construction Playbook* states that public construction projects should be accompanied by whole life carbon assessments (WLCA). The Infrastructure and Projects Authority has worked across central-government departments to agree a set of WLCA standards and requirements.
R2022-253	Finalise the Industrial Carbon Capture (ICC) business model and deliver the first industrial carbon capture contracts to enable final investment decisions on the first ICC projects in H1 2023, consistent with the Government's ambition to deploy carbon capture in at least two clusters by the mid-2020s. **Primary responsibility**: DESNZ	The Government intends to publish an updated version of the Industrial Carbon Capture (ICC) and Waste ICC Contracts later this year, this version will be the Basis for Negotiating upon with the three industrial and two waste projects who were shortlisted on the Track-1 Project Negotiation List to proceed to the negotiations phase of the Cluster Sequencing Process. This is a significant step towards the UK’s first operational Carbon Capture, Usage and Storage (CCUS) networks, delivering first of a kind carbon capture projects in the UK and underlining the Government's commitment to delivering on net zero ambitions. The Government will work to identify projects that could be potential alternatives to any of the initial Track-1 projects, if any

#	Recommendation	Response
		are unable to agree contracts within the criteria and timelines required. The Government will continuously monitor the value for money offered by the Track-1 Project Negotiation List, to ensure only the best and most cost-effective capture projects reach final investment decisions.
R2022-254	Finalise and deliver the Transport and Storage Regulatory Investment business model in 2022, consistent with the Government's ambition to establish at least two CCS transport and storage clusters in the mid-2020s. This will require promptly beginning the process of awarding permits and construction of the necessary infrastructure, to ensure that it is ready in time for deployment. **Primary responsibility**: DESNZ	The version of the Transport and Storage Regulatory Investment (TRI) model set to be published prior to Track-1 Final Investment Decisions (FIDs) is expected to be delivered in the second half of 2024. The TRI Update v1.1 is set to be published in the second half of 2023.
R2022-256	Publish a plan for distribution and storage of hydrogen outside clusters. **Primary responsibility**: DESNZ	Dispersed industrial sites account for approximately half of the UK's industrial emissions and hydrogen can be important in helping to decarbonise industrial sites which are harder or more expensive to electrify, including those outside large industrial clusters. In August 2023 the Government response to the hydrogen transport and storage infrastructure consultation set out our minded-to position that some form of strategic planning, potentially combined with elements of market-led development, is likely necessary to enable the efficient, cost-effective and timely roll-out of Transport and Storage (T&S) infrastructure. Strategic planning can also give clarity and confidence to off-takers for whom hydrogen is a viable decarbonisation pathway. We intend to publish a hydrogen networks pathway, to set out the next steps in our vision for the development of hydrogen

#	Recommendation	Response
		T&S infrastructure across the UK. This aims to set out in more detail the considerations necessary to assess the T&S needs across the future hydrogen economy, both within and beyond industrial clusters.
R2022-261	Publish a plan for CO_2 transport from dispersed sites before the end of 2022. **Primary responsibility**: DESNZ	The Government is committed to further development of Carbon Capture, Usage and Storage (CCUS), and continues to explore the development of pipeline and non-pipeline options for sites outside the CCUS Cluster Sequencing Track-1 locations and potential interactions with business model support. The Track-2 process will establish 2 new CCUS clusters. Government has concluded that Acorn and Viking Transport and Storage (T&S) systems, due to their maturity, remain best placed to deliver our objectives for Track-2, at this stage, subject to final decisions, due diligence, consenting, subsidy control, affordability, and value for money assessments. The Government has been clear that Acorn and Viking T&S system must credibly demonstrate the potential to receive and store CO2 through non-pipeline transport (NPT) in a timeframe consistent with Track-2 objectives. Though the initial projects will connect to the store via pipeline, the Government will progress development of its NPT policy in due course to facilitate the connection of projects and clusters reliant on NPT, subject to factors including due diligence and value for money assessment. We will set out a vision for the UK CCUS sector later in 2023 to raise confidence and improve visibility for investors. Additionally, government is providing up to £5 million for dispersed sites to develop strategic, area-based plans to decarbonise, which is technology agnostic and could facilitate strategic thinking on dispersed CCUS networks in different locations.

#	Recommendation	Response
R2022-262	Set the 'Resource efficiency and waste reduction' target(s), enabled by the new Environment Act powers, in a way that drives the delivery of emissions abatement from resource efficiency set out in the Resources and Waste Strategy and the Net Zero Strategy. This should recognise the role that raw material extraction and the design, longevity and reuse of materials and products can play in reducing the impacts of new product demand, while realising potential co-benefits. **Primary responsibility**: Defra	The Environment Act 2021 target to reduce residual waste (excluding major mineral wastes) kg per capita by 50% from 2019 levels by end 2042 can be achieved through waste prevention, resource efficiency, and recycling of unavoidable waste. Defra recognise the desire to see an additional target that reduces material resource use and improves productivity. Defra research, along with advice from a group of independent experts, indicates that setting a legally binding target at this stage would be premature. However, the Department continue to investigate this and are taking forward further research on policies to improve resource efficiency in collaboration with the Department for Energy Security and Net Zero.
R2022-263	Take a leadership role in pushing for inclusion of a 2050 Net Zero target within the 2023 update of the International Maritime Organisation's initial greenhouse gas strategy. **Primary responsibility**: DfT	The UK played a leading role in the negotiations on the revision of the *International Maritime Organisation (IMO) 2023 Greenhouse Gas Strategy*. We are proud that IMO Member States unanimously supported this new Strategy that will see emissions reach net zero by or around 2050, keeping 1.5°C within reach. The UK pushed hard for a pathway encouraging deep emissions cuts in the 2030s and 2040s. Unlike other international agreements of this scale, this Strategy covers all greenhouse gases and restricts out-of-sector offsetting so the sector cannot pass on its responsibility to transition away from fossil fuels. The Strategy has also made progress on the policy measures necessary for shipping to decarbonise, and Marine Environment Protection Committee (MEPC 80) initiated a comprehensive impact assessment to facilitate further development. The UK played a crucial role in securing an ambitious timetable for policy development, which will see measures adopted in 2025 and implemented in 2027.

#	Recommendation	Response
R2022-264	Consider how to avoid the extension of the UK Emissions Trading Scheme to shipping causing displacement of activity to higher-carbon alternative modes (e.g. road freight). **Primary responsibility**: DfT	We have recently announced that we will be expanding the UK Emissions Trading Scheme (UK ETS) to include emissions from domestic maritime. We see this as an opportunity to both reduce emissions across the sector and be an effective driver for the decarbonisation of domestic shipping. We received helpful responses on the potential for transport modal shift through the Developing the UK ETS consultation, which we outlined in the Government response to the consultation, published in July 2023. We are considering the potential risk of modal shift as we develop the policy further. We intend to set out additional details on this in a further consultation later in 2023.
R2022-265	Build upon the proposals for the UK Emissions Trading Scheme and the UK MRV regulations to explore options for an activity-based measure of UK shipping emissions. This should include exploring the benefits of changing the emissions accounting approach for international shipping, to ensure that a fair share of emissions for voyages to and from the UK are captured within the UK's inventory even if vessels refuel in other jurisdictions. **Primary responsibility**: DfT	The UK's National Atmospheric Emissions Inventory (NAEI) currently uses an activity-based measure of UK domestic shipping emissions. The Department for Transport is now developing a new maritime emissions model to improve the department's internal analytical capabilities relating to maritime decarbonisation, including to enable us to better understand the UK's current shipping emissions and enable us to forecast how these emissions could change in the future under different scenarios. An initial version of the new emissions model that focuses on UK domestic shipping emissions is expected to be finalised this year. Following this, as part of the continued development of this new emissions model, the Government will explore options for developing an activity-based measure of UK international shipping emissions.
R2022-266	Build upon the summary of responses to develop a plan on the use of shore power and electric recharging infrastructure at all of the UK's major ports. This should	Since we published our summary of responses to the shore power call for evidence, the Government has publicly confirmed that it is no longer pursuing a specific shore power

#	Recommendation	Response
	include identifying roles and responsibilities for delivery and providing support and incentives to drive investment. **Primary responsibility**: DfT	mandate. This includes updating industry and GOV.UK on the outcome of the call for evidence. Instead, we are planning a call for evidence on net zero ports. We will take a technology neutral approach to the technologies infrastructure and other changes that may be required at ports to enable ships to reduce their emissions whilst at berth and to help them decarbonise more broadly. This is likely to continue to include shore power alongside other alternatives that can provide the same outcomes. Information gathered by the call for evidence as part of the net zero ports workstream will help inform future policy direction on technology solutions and deployment in this area.
R2022-267	Commit to the UK's first clean maritime cluster(s) operating at commercial scale (supplying at least 2 TWh/year of zero-carbon fuels) by 2030 at the latest. **Primary responsibility**: DfT	We are unable to commit to this at present, but there are several actions which support this commitment indirectly: 1. The UK SHORE programme will fund research and development into clean maritime through a series of interventions until 2025. 2. Under the Clean Maritime Council, a specific Maritime Fuels Task and Finish Group has been established where group members will help identify not only the aggregate demand of different zero and near-zero maritime fuels but also the regions where we expect to see the different demand. This will help inform future policy work. Related to this is that, as part of the refreshed Clean Maritime Plan, we intend to make a commitment on how we will increase the use of low carbon maritime fuels.

#	Recommendation	Response
		In 2021 the Renewable Transport Fuels Obligation (RTFO) introduced support for domestic and international maritime use of renewable fuels made from energy.
R2022-268	Embed the Course to Zero response into the next update of the Clean Maritime Plan. This should present a credible plan for how the trajectory to Net Zero will be delivered. **Primary responsibility**: DfT	The refresh of the *Clean Maritime Plan* is due to be published by the end of 2023. Included in the *Clean Maritime Plan* will be a trajectory to net zero by 2050, along with interim goals to meet prior to 2050. We will be using the evidence gathered as part of the Course to Zero consultation to develop the policies included in the *Clean Maritime Plan*, as well as the trajectory to net zero emissions.
R2022-270	Publish the outcome of the Course to Zero consultation. This should aim to set an ambitious trajectory to Net Zero for the domestic maritime sector. **Primary responsibility**: DfT	The summary of responses to the Course to Zero consultation has now been published. This sets out the responses on the pathway to net zero emissions, the barriers to decarbonisation within the maritime section, and further policy options which should be considered. In the full government response to the consultation, which we aim to publish alongside our forthcoming *Clean Maritime Plan*, we will set out our ambitious, but feasible, pathway to net zero emissions for the domestic maritime section. This will reflect the outcomes of recent negotiations at the International Maritime Organization (IMO) which set a target for zero by near 2050, and further targets in 2030 and 2040.
R2022-271	Continue to report on progress in identifying green shipping corridors and the actions to implement them, as agreed within the Clydebank Declaration. An annual report should be published ahead of COP28.	The Clydebank signatories are currently developing plans for their own green corridors, and we are engaging with all signatories to share learning and develop plans synchronously.

#	Recommendation	Response
	Primary responsibility: DfT	The Department for Transport aims to provide an update on the Clydebank Declaration at COP28. With regards to UK Green Corridors, the UK Shipping Office for Reducing Emissions (UK SHORE) is supporting the feasibility studies of several green corridors, including with France, and is working closely with several others including the USA, Canada, and Singapore on what it would take to implement corridors with those countries.
R2022-275	Consult on regulations requiring EV batteries sold in the UK to be recyclable. These should be coordinated with requirements in other markets to ensure that batteries can be reliably recycled across jurisdictions. **Primary responsibility**: Defra	Defra will publish a consultation in due course which aims to ensure batteries of all types and chemistries are collected and managed responsibly at end-of-life. This will include consulting on regulations requiring Electric Vehicle (EV) batteries sold in the UK to be managed effectively at waste to maximise material efficiency and reduce waste. Industrial batteries (including EV batteries) are already banned from landfill and producers are responsible for managing their end-of-life treatment, including recycling. EV batteries in particular can be re-used or repurposed when they no longer have the capacity to power an EV, further lengthening their life and maximising material retention before they go for recycling.
R2022-277	Continue to support widespread deployment of charging infrastructure, ensuring that deployment rates accelerate in line with the trajectory required to deliver a minimum of 300,000 public chargepoints by 2030. **Primary responsibility**: DfT	The majority of Electric Vehicle (EV) drivers charge at home, and we expect this to continue as EV use increases. However, a robust public charging network is needed to enable long journeys and to support drivers without off-street parking. The Government estimates that by 2030, around 300,000 public chargepoints will be needed as a minimum. We expect to see a market-led rollout for the majority of chargepoints. The Government's investment is focused on two sectors where we need an accelerated pace of rollout, and

#	Recommendation	Response
		where the business case is challenging: high powered chargers on the strategic road network (Rapid Charging Fund) and local on-street charging (Local EV Infrastructure Fund). Last year's EV Infrastructure Strategy set out the Government's approach to these interventions. It also set out our intention to shape the right regulatory framework for this sector, to ensure charging is "easier, cheaper and more convenient than refuelling".
R2022-279	Enact legislation requiring better reliability, accessibility, interoperability and ease-of-use at public chargepoints, as committed to in the Government response to the consultation on the consumer experience at public chargepoints. **Primary responsibility**: DfT	To increase confidence in the charging network and reduce charging anxiety the Government has laid regulations to improve the consumer experience across the public charging network and has published accompanying guidance. This includes regulating to simplify payment methods, including roaming, ensure reliability and make public Electric Vehicle chargepoint data freely available, helping drivers easily locate and access available chargepoints, and helping drivers better understand the price of charging.
R2022-282	Prioritise delivery of a new, transparent public transport fare structure that offers more affordable and reliable travel, ensuring fairness in relation to more carbon-intensive choices, and a more interlinked public transport system between operators. **Primary responsibility**: DfT	As part of the Plan for Rail we will invest to radically reform and improve passengers' experience of fares, ticketing and retailing on the railways. We want to simplify the current mass of complicated fares and tickets, whilst protecting affordable turn-up-and-go tickets and season tickets. We have already made progress on fares reforms including introducing flexible season tickets, expanding single leg pricing and committing to pay-as-you-go in urban areas across the country.

#	Recommendation	Response
		For buses, Enhanced Partnerships and franchising are helping to establish locally-led frameworks, with the most appropriate fares and ticketing schemes for localities or sub-regions. The Government is also working with representatives from the bus industry and local government to develop a national solution to enable multi-operator ticketing (with capped fares). In January, we introduced a £2 cap on single bus fares which is set to run until 31 December 2024.
R2022-283	Publish a comprehensive plan setting out how the Government's target of removing diesel passenger trains from the railway by 2040 and achieving a Net Zero rail network by 2050 or earlier will be achieved. **Primary responsibility**: DfT	In July 2021, the Department for Transport published *Decarbonising Transport: A Better, Greener Britain*, which committed to delivery of a net zero rail network by 2050, with an ambition to remove all diesel-only trains by 2040. We are working with the Great British Railways Transition Team to bring forward costed options to decarbonise the whole network for government to carefully consider in terms of overall deliverability and affordability. Electrification will play an important role in our decarbonisation programme, but alternative technologies such as hydrogen, battery and bi-modes will also play a part. Since 2010, more than 1,200 miles of electrification has been delivered in Great Britain, including almost 800 miles in England and Wales in the last seven years. We will continue to ensure that new schemes deliver value for money for taxpayers and that the industry is able to deliver a decarbonisation programme in a sustainable way.
R2022-286	Review and strengthen rapid charger rollout plans on the major road network out to 2035, to ensure that drivers	Around 97% of motorway service areas (MSAs) in England already have charging available, including more than 450 open access (can be used with any electric vehicle), rapid (50kW)

#	Recommendation	Response
	have the confidence that they can find reliable, available chargepoints as EV uptake grows. **Primary responsibility**: DfT	and ultra-rapid (150kW+) chargepoints. Over 230 of these are ultra-rapid chargepoints. The Government is already collaborating on projects that aim to support early interventions works including a joint Energy Storage Systems (NHESS) project with National Highways using £11 million to fund on-site electricity storage solutions; and The Green Recovery Scheme (GRS) administered by Ofgem aimed at reinforcing the electricity network, with a focus on enabling low-carbon technologies. The Rapid Charging Fund (RCF) will fund a portion of the cost of upgrading the electricity grid at strategic locations where it is currently uncommercially viable to do so. The RCF will ensure that the private sector can continue to expand the charging network and future-proof electricity network capacity. A pilot is expected in due course.
R2022-290	Work with the freight industry to design and implement pilot schemes to explore approaches to reducing van and HGV usage in urban locations. **Primary responsibility**: DfT	We continue to work alongside industry in discussions on decarbonising existing fleets, including with new technologies and consolidation, as well as in relation to air quality, safety and congestion. We do not believe that pilot schemes are necessary at this stage, as alternate zero emission vehicles such as e-cargo bikes are already commercially available and are starting to be taken up by industry. Our announced end of sale dates for new non-zero emission vans and HGVs has set the pathway for the transition to zero emission vehicles, with these being supported through the plug-in grants. We have adapted vehicle weight regulations to ensure that zero emission vehicles can carry the same payload

#	Recommendation	Response
		as their petrol and diesel equivalents, avoiding the need for operators to use additional vehicles to deliver the same amount of goods.
R2022-292	Scope and develop options for addressing the fiscal risks from transport's decarbonisation pathway (e.g. road pricing). **Primary responsibility**: HMT	As the Prime Minister set out in his speech on the 20 September, this Government is committed to meeting our net zero targets in a pragmatic, proportionate and realistic way that eases the burdens on families and preserves choice. The shift to zero emission vehicles is crucial for decarbonising the transport sector and tackling climate change, while injecting billions of pounds worth of investment into our economy and creating high skilled jobs. As the Government's *Net Zero Strategy* set out, as we transition to net zero, the government will need to ensure that the tax system encourages the uptake of Electric Vehicles (EV), and revenue from motoring taxes will need to keep pace with this change. For instance, at Autumn Statement 2022, the Chancellor announced that from April 2025 electric cars, vans and motorcycles will begin to pay Vehicle Excise Duty (VED) in the same way as petrol and diesel vehicles.
R2022-295	Support the deployment of public chargepoints across Northern Ireland, to address the issue that Northern Ireland currently has the fewest EV chargepoints per capita of any of the UK nations. **Primary responsibility**: Northern Ireland	Department for Infrastructure (DfI) support the EU INTERREG VA Funded FASTER electric vehicle network project which is expected to install 20-30 EV Rapid charging points at publicly accessible locations across Northern Ireland. DfI have provided support to local councils successful in securing funding through the On-street Residential Chargepoint Scheme (ORCS) which will be used to provide EV charging for those without access to a driveway.

#	Recommendation	Response
		An Electric Vehicle Infrastructure Task-Force was established to consider our EV Infrastructure requirements and published its action plan in November 2022 to deliver a fit for purpose, modern EV charging network. The introduction of the ZEV mandate from January 2024 has provided the confidence in the market that has encouraged additional providers such as Weev, Maxol and BP Pulse now deploying their networks across NI in addition to the existing ESB network. The Department of Finance (DoF) is working to assist clients on the Civil Service Office Estate where they wish to install EV charging points. Ten chargers are currently operational with further installations planned.
R2022-301	Take action to reduce the cost of local public charging for drivers who do not have access to private off-street parking to make it more comparable to charging at home. This should include reducing VAT on residential public charging. **Primary responsibility**: DfT	VAT is a broad-based tax on consumption. The 20% standard rate applies to most goods and services, including public EV charging. Whilst there are exceptions to the standard rate, these have always been limited by legal and fiscal considerations. For instance, in recognition of the fact that families should not have to bear all the VAT costs they incur to meet their needs, domestic energy attracts the reduced rate of VAT (5%). Whilst this relief was not designed for home EV charging, it applies to all uses of domestic energy. VAT is the UK's third largest tax, forecast to raise £161 billion in 2023/24, helping to fund key spending priorities. Expanding this VAT relief would impose additional pressure on the public finances to which VAT makes a significant contribution. Yet,

#	Recommendation	Response
		there is no guarantee that this saving would be passed onto consumers. Nevertheless, the Government keeps all taxes under review.
R2022-302	Publish a detailed plan to decarbonise the waste sector (including Energy from Waste and wastewater) in line with meeting the Sixth Carbon Budget and Net Zero. This should set out how policies are expected to deliver emissions reduction in the Waste sector, how these will be sufficiently funded and incentivised, how waste processing and treatment capacity aligns to emissions pathways and how efforts will be coordinated across the different nations and sectors. **Primary responsibility**: Defra	Defra will publish a Waste Sector Decarbonisation plan in due course. It will build on the *Resources and Waste Strategy for England,* and bring together policies, plans and research from across Government which will help us in our journey to decarbonise the waste sector through to Carbon Budget 6. Policies in the plan will be funded. The plan will be for England only but will show the join up between the Devolved Administrations both generally and for individual policies.
R2022-304	Continue to develop plans for shifting towards an Energy from Waste (EfW) fleet fitted with CCS from the end of this decade. As part of this set out an assessment of potential viability of existing and future EfW sites for CCS and implications for decarbonising the sector. **Primary responsibility**: DESNZ	We are engaging with industry to encourage decarbonisation of the residual waste management sector and working across government to develop policies to enable this, including the Waste ICC business model and decarbonisation readiness provisions, which were consulted on in March 2023. Two waste Carbon Capture Utilisation & Storage (CCUS) projects have been shortlisted to proceed to the negotiations phase of Track-1 of the CCUS Cluster Sequencing Process, which subject to negotiations could demonstrate the commercial viability of CCUS in the sector and facilitate future deployment and decarbonisation. The UK Emissions Trading Scheme (ETS) Authority has announced its intention to include EfW installations in the ETS from 2028 providing an incentive to decarbonise for facilities where it is technically and economically viable to do so. Many EfWs require non-pipeline transport solutions to deploy CCUS. Government will progress

#	Recommendation	Response
		development of its NPT policy in due course to facilitate the connection of projects reliant on NPT, subject to factors including due diligence and value for money assessment.
R2022-305	Clarify details of how the £295m capital funding for food waste collections announced in the Net Zero Strategy will be spent to prevent food waste from going to landfill. We will assess whether this is included in either the forthcoming final Waste Prevention Programme or the Resources and Waste Strategy addendum. **Primary responsibility**: Defra	Defra is currently developing a funding formula to distribute capital funding to those authorities who will require additional capital investment to meet the requirements of the Environment Act 2021 to separately collect food waste weekly. This funding is to help local authorities with the purchase of bins and vehicles needed to provide weekly food waste collections. Evidence to support this has been gathered through WRAP's local authority portal and engagement with local authorities. As this funding relates to New Burdens, we have engaged the Local Government Association (LGA) on proposals.
R2022-307	Finalise plans to introduce mandatory business food-waste reporting so that it can be phased in from the beginning of 2024. Engage WRAP in providing or brokering consistent methods of measurement and associated data sets. **Primary responsibility**: Defra	The Government has decided to enhance the voluntary approach to food waste reporting to avoid introducing measures that would drive inflation while cost of living challenges remain an issue for many consumers, as set out in the 2023 response to the consultation on improved food waste reporting for large food businesses. Government analysis indicates that the total average annual reporting costs to business of mandatory reporting would be £63.8 million over the 12-year appraisal period, compared to £11.7 million from a voluntary approach. In the context of seeking to avoid regulatory burdens on businesses, which could be passed on with inflationary impacts to consumers, the Government considers this cost to be too high. Defra has funded WRAP to develop guidance and methodologies for businesses to utilise when measuring and reporting food waste. These methods of measurement have been used under the Courtauld Commitment and Food Waste Reduction Roadmap voluntary

#	Recommendation	Response
		approaches. This ensures that data collected by industry is standardised and comparable. This voluntary approach will be in place until mid-2025 at a minimum at which point the position will be reviewed.
R2022-308	Formalise commitment to prevent key biodegradable waste streams (including municipal and non-municipal sources) from going to landfill by 2028 at the latest and clarify details of additional policies needed to achieve this. **Primary responsibility**: Defra	The Government is committed to achieving the near elimination of biodegradable municipal waste to landfill from 2028. The Government therefore encourages waste producers, local authorities, waste operators and investors to consider their own practices and explore options to prevent biodegradable wastes from being sent to landfill at the earliest opportunity ahead of any formal policy intervention. On 14 July 2023, we concluded our call for evidence to support the exploration of policies to achieve this commitment. We are now analysing the responses and will consult on detailed policy proposals in due course.
R2022-310	Set out how incentives across the waste sector are appropriate for achieving dual aims of waste reduction and decarbonisation. This should consider pricing of waste management solutions as well as materials. We will assess whether this is included in either the forthcoming final Waste Prevention Programme or the Resources and Waste Strategy addendum. **Primary responsibility**: Defra	Policies to reduce waste, promote resource efficiency and to encourage more environmentally friendly waste management options are already backed by incentivisation mechanisms such as the Plastic Packaging Tax and Landfill Tax. The Department for Energy Security and Net Zero and Defra are also exploring options to go further. For example, the UK Emissions Trading Scheme (ETS) Authority has announced its intention to include EfW installations in the ETS from 2028, preceded by a 2-year monitoring, reporting and verification (MRV) period. This will incentivise the further diversion of waste out of the residual waste stream and will also help to build the investment case for decarbonisation technologies and recycling infrastructure. These policies will work alongside policies such as the waste Industrial Carbon Capture business model which is designed to incentivise the deployment of

#	Recommendation	Response
		carbon capture technology in the residual waste management sector, where there is no viable alternative to achieve deep decarbonisation.
R2022-311	Publish an assessment of residual waste treatment capacity needs through to 2050, consistent with meeting committed and prospective recycling and waste reduction targets, expected resource efficiency improvements and the stated goal to end the landfilling of biodegradable waste by 2028. The findings of this review should inform future incineration/EfW capacity decisions and consider the feasibility of phasing out waste exports by 2030. **Primary responsibility**: Defra	Defra is developing a roadmap for waste infrastructure in partnership with WRAP that will set out current and forecast waste infrastructure capacity and arisings to 2035. Analysis of residual waste capacity has also been undertaken. We plan to publish these analyses by the end of this year now the government response on our consultation on simpler recycling has been published. They will provide clarity to investors as to where there is forecast to be over or under provision of waste infrastructure in response to the Collection and Packaging Reforms. These forecasts and analyses will form the foundation of future assessment that would take into account future policy development, including the legally binding Residual Waste Reduction Target, once details of these policies are known and forecasts can be made.
R2022-312	Review the National Planning Policy Statement for waste (not updated since 2014) to ensure it is fit to deliver the infrastructure needed to achieve recycling targets and support future residual waste needs and decarbonisation requirements. **Primary responsibility**: DLUHC	In line with the *Resources and Waste Strategy* commitment we continue to monitor England's waste infrastructure capacity and associated infrastructure requirements. The National Planning Policy for Waste (NPPW) outlines the pivotal role planning plays in delivering our waste ambitions. This supports the delivery of recycling targets by driving waste management up the waste hierarchy. It outlines that waste planning authorities should prepare Local Plans which identify sufficient opportunities to meet the identified needs of their area for the management of waste, thus supporting future residual waste needs. Waste planning authorities should also consider siting low carbon energy recovery facilities to enable the utilisation of the heat produced. We have committed to

#	Recommendation	Response
		update national planning policy to support the implementation of the planning reforms set out in the Levelling Up and Regeneration Bill, once the Bill has achieved Royal Assent. This will provide an opportunity to reflect wider government policy around Carbon Capture, Usage and Storage and decarbonisation requirements.
R2022-313	Set out how methane capture and oxidisation rates at landfill sites will be improved. We will assess whether this is included in either the forthcoming final Waste Prevention Programme or the Resources and Waste Strategy addendum. **Primary responsibility**: Defra	Defra is working with the Environment Agency to investigate the potential for improved methane capture at open and recently closed landfill sites. The Environmental Services Association announced a commitment to improve their capture rates in their net zero strategy by 2030. The Environment Agency and Defra are exploring coordinated programmes to develop a fugitive landfill gas measurement system and methodology which could be drawn up as a standard. Research programmes to investigate interventions for improved landfill gas capture are in development. Once developed, any resulting robust and standardised fugitive gas measurement system would be used to underpin intervention and improvement cycles. Defra is investigating business pressures that act against further improvement and considering support in this area. The potential for planting woodland on closed landfills for improved oxidation will be explored.
R2022-314	Clarify the future role of anaerobic digestion and composting in waste treatment and set out how emissions from these treatment methods will be reduced. We will assess whether this is included in either the forthcoming final Waste Prevention Programme or the Resources and Waste Strategy addendum.	New s45 of the Environmental Protection Act 1990 (amended by the Environment Act 2021) requires all local authorities and businesses in England to arrange for the collection of food waste for recycling or composting. This waste must be disposed of by anaerobic digestion or composting in accordance with the waste hierarchy and never

#	Recommendation	Response
	Primary responsibility: Defra	sent to residual waste treatment - resulting in significant carbon savings over sending food waste to residual waste treatment. The Department for Energy Security and Net Zero's Green Gas Support Scheme provides tariff support to facilitate the construction of new anaerobic digestion facilities. Following a mid-scheme review of the Green Gas Support Scheme, Department for Energy Security and Net Zero and the Environment Agency are also exploring options to incentivise sustainable practices to maximise the environmental benefits of anaerobic digestion, while ensuring that any unintended consequences, including fugitive methane emissions, are mitigated. Defra is also exploring R&D opportunities for increasing carbon benefits from anaerobic digestion and improving the quality of digestate, offsetting fossil-based fertilisers.
R2022-315	Publish an assessment of residual waste treatment capacity needs through to 2050, consistent with meeting committed and prospective recycling and waste reduction targets, expected resource efficiency improvements and ending the landfilling of biodegradable waste by 2028 at the latest. The findings of this review should inform future incineration/EfW capacity decisions and consider the feasibility of phasing out waste exports by 2030. **Primary responsibility**: Northern Ireland	An assessment of residual waste treatment capacity needs through to 2050 is in the early stages of scoping and development. Northern Ireland's first *Climate Action Plan (CAP)* will set out policies and proposals for decarbonising the waste sector, including reforming waste collections from households, the introduction of non-household municipal recycling and exploring options for banning biodegradable waste to landfill. A feasibility study on the biodegradable waste issue is being undertaken. Consultations on recycling and banning biodegradable waste to landfill are planned for 2023 and 2024 respectively. No work has yet been started on the phasing out of waste exports, but may be considered for NI's second carbon budget period 2028-2032.

#	Recommendation	Response
R2022-319	Set out an assessment of the behaviour changes needed to achieve targets for food-waste reduction, recycling and improved end user consumption. We will assess whether this is included in either the forthcoming final Waste Prevention Programme or the Resources and Waste Strategy addendum.	There are multifaceted reasons for household food waste and a holistic approach is required to aid citizens to buy what you need and eat what you buy. Through the Waste and Resources Action Programme behaviour change is tackled through not only awareness raising (Food Waste Action Week) and advice provision (lovefoodhatewaste) but also changing the retail environment to help citizens waste less. For instance, through on pack messaging providing freezing storage advice and leftover messages and tips; changes to packaging such as resealable packs; date label information, for instance where possible removing open life statements; and selling uncut fruit and vegetable loose so citizens can buy what they need.
R2022-320	Finalise the Waste Prevention Programme, including by setting out details on additional actions needed to achieve committed recycling and waste reduction targets. **Primary responsibility**: Defra	*Maximising Resources Minimising Waste* was published on 28 July 2023. The programme sets out details and timelines for action to manage resources and waste in accordance with the waste hierarchy.
R2022-321	Implement initial Extended Producer Responsibility, the Deposit Return Scheme and consistent collections of recycling and food waste in a coordinated way and without further delay and confirm that funds raised by EPR will be used to support recycling and waste prevention efforts. Consider how EPR can be improved in the future to specifically encourage re-use. **Primary responsibility**: Defra	The Government is pushing ahead with our programme of reforms to reduce waste and improve our use of resources – building on our commitments clearly set out in the Environmental Improvement Plan earlier this year. In July 2023 Defra announced a 12-month deferral to the start of Extended Producer Responsibility (EPR) payments from 2024/25 to 2025/26. This was in recognition of the current pressures on business. This was a joint decision with the Devolved Administrations and applies UK-wide. We also launched a consultation on the draft regulations that will

#	Recommendation	Response
		introduce EPR and committed to further engagement on the design of operational aspects of the scheme. In August Defra launched the Reporting Packaging Data Digital system through which obligated businesses will report packaging data for EPR. In October 2023 Government published the *Simpler Recycling* consultation response (formerly known as *Consistency in Recycling*). This sets out timelines for introducing *Simpler Recycling*. The household implementation timelines are aligned with Extended Producer Responsibility for packaging to ensure that local authorities are properly funded for the collection of dry recyclable packaging from households. Government has set a stretching go-live date for the Deposit Return Scheme (DRS) to start from 1 October 2025 and this remains the intention. Defra is continuing to work with the Devolved Administrations to progress EPR and DRS across the UK.
R2022-322	Set ambitious post-2035 recycling targets alongside possible policy options for delivering such targets, including increasing investment to deliver long-term infrastructure needs. **Primary responsibility**: Defra	The Government has set a long-term, legally binding waste target to reduce residual waste (excluding major mineral waste) kg per capita by 50% by 2042 from 2019 levels. We have also set short-term interim targets, and future interims will be set in the next Environment Improvement Plan. The Government is also taking measures to ensure we recycle at least 65% of municipal waste by 2035. Within the Resources & Waste Strategy evaluation, a list of indicators will be reported against annually in the Monitoring Progress publication.

#	Recommendation	Response
		We have taken significant action to drive progress. This includes introducing Extended Producer Responsibility to ensure producers cover the full net cost recovery for packaging; making recycling simpler and more consistent in England, including collecting more materials like plastic film and separate food waste; and introducing a deposit return scheme for drinks containers. These reforms provide clarity to investors and support infrastructure development.
R2022-323	Review the impact of the newly introduced Plastic Packaging Tax and consider opportunities to go further, including integrating an escalator on the price of the tax and the recycling threshold to which it applies. **Primary responsibility**: HMT	The Plastic Packaging Tax is an environmental tax which aims to encourage businesses to use more recycled plastic in packaging. At Tax Administration and Maintenance Day 2023, HMRC announced it conduct a formal evaluation of the tax through analysis of environmental and tax data, as well as customer research, to assess both the impact of the measure and the experience of businesses. More information about the evaluation of the Plastic Packaging Tax will be published later this year.
R2022-327	Set ambitious recycling targets for 2030 and beyond, improving on the 70% target for 2025. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2022-329	Set out further detail on actions and implementation timelines to ensure all recommendations from the incineration review can be delivered. This should include explaining how the projected residual waste capacity gap	The Scottish Government published its response to Dr Church's first report on the Review of Incineration in Scotland's Waste Hierarchy, and accepted all recommendations. The response can be found at https://www.gov.scot/publications/scottish-government-

#	Recommendation	Response
	in 2025 will be managed whilst ensuring commitments to end the landfilling of biodegradable waste are met. **Primary responsibility**: Scotland	response-stop-sort-burn-bury-independent-review-role-incineration-waste-hierarchy-scotland/ On 5 May 2023, the Scottish Government published its response to the second and final report of the independent incineration review, which can be found at https://www.gov.scot/publications/scottish-government-response-stop-sort-burn-bury-independent-review-role-incineration-waste-hierarchy-scotland-second-report-decarbonisation-residual-waste-infrastructure-scotland/ The Scottish Government's 2022 consultation on the development of a Circular Economy and Waste Route Map sets out a proposal to develop a Residual Waste Plan to minimise the environmental impact of waste, setting the strategic direction for management of residual waste to 2045 and to bring this area in-line with Net Zero targets. The Scottish Government is considering consultation responses and will refine these proposals in its final Route Map.
R2022-332	Publish a detailed strategy, building on the Route Map consultation of 2022, setting out how the Scottish Government will achieve a 20% reduction in car-kilometres by 2030 and deliver 20-minute neighbourhoods. This should include both investment in more sustainable modes of travel and measures to reduce the attractiveness of driving. **Primary responsibility**: Scotland	Following a post-publication public consultation on the draft route map, Transport Scotland is currently working with local authority partners to prepare a final version of the route map for publication in the coming months. The route map outlines our investment in more sustainable modes, including our commitment to increase the proportion of Transport Scotland's budget that is spent on active travel, so that by 2024-25 at least £320 million or 10 percent of the total transport budget will be allocated to active travel, and a commitment to invest over £500 million in bus priority measures. The Scottish Government also recognises the need to reduce the attractiveness of driving, and we have commissioned research exploring equitable options for demand management which we

#	Recommendation	Response
		will publish later this year. Using the research findings, we will work with local and regional partners to develop a demand management framework. We have published a draft of *Local Living* and *20 Minute Neighbourhood Guidance.*
R2022-336	Deliver the public transport fares review outlined in the Route Map. This should consider: prioritising delivery of a new, transparent fare structure that offers more affordable and reliable travel, ensuring fairness in relation to more carbon-intensive choices, and a more interlinked public transport system between operators. **Primary responsibility**: Scotland	We are progressing the Fair Fares Review to ensure a sustainable and integrated approach to public transport fares that supports the future long term viability of a public transport system that is accessible, available and affordable for people throughout Scotland. The Fair Fares Review advice will report by the end of 2023 and will recommend a package of measures which can be considered for implementation from 2024-25 and onwards.
R2022-338	Develop an implementation plan to deliver the Scottish Government's vision for the public EV charging network. This should ensure the EV transition works for all road users in Scotland and accelerates in line with EV uptake, delivering 6,000 chargepoints by 2026 and approximately 24,000 chargepoints by 2030. **Primary responsibility**: Scotland	Scotland already benefits from the highest number of public electric vehicle charge points per head of population, higher than anywhere else in the UK outside of London. However, the Scottish Government recognises that further investment will be required at scale and pace over the coming years and is taking the steps to enable this to happen. In June it published its *Vision for Scotland's Public Electric Vehicle Charging Network* in June this year. Through its Electric Vehicle Infrastructure Fund it aims to leverage £60 million of public and private investment to double the network to 6,000 charge points by 2026. Over the next year the Scottish Government will continue to work with stakeholders including consumers, industry and public bodies, engaging Cosla and local authorities, in order to identify further implementation actions needed to deliver the vision and a world-class public charging network.

#	Recommendation	Response
R2022-348	The Scottish Government should Implement the Air Departure Tax (ADT) as soon as possible. Once implemented, use the tax to address price imbalances between aviation and alternative, lower-emissions forms of surface transport (e.g. rail) to encourage modal shift. Also consider other policy levers, such as information provision, to encourage a reduction in the number of flights taken. **Primary responsibility**: Scotland	The Scottish Government remains committed to introducing Air Departure Tax (ADT) once the long-standing issue around the Highlands and Islands exemption has been resolved. The relevance of the new UK subsidy control regime is being carefully considered in this regard. The Scottish Government committed in its Programme for Government 2021-22 to review the UK Passenger Duty (APD) rates prior to the introduction of ADT to reflect our goals on climate change, including the possibility of a higher tax for more polluting aircraft. We will also take account of the Committee's recommendations as part of that process at the relevant time. In the meantime, the UK Air Passenger Duty arrangements continue to apply in Scotland.
R2022-356	Ensure that funding and incentives are set at the correct level to meet the Scottish Government afforestation target of 18,000 hectares per year by 2025. **Primary responsibility**: Scotland	Current policy in Scotland is to increase woodland creation to 18,000 hectares a year by 2025 and maintain it at that level thereafter. This will be supported through the Forestry Grant Scheme as well as mechanisms to attract private finance, notably the Woodland Carbon Code.
R2022-383	Publish developed plans to deliver energy efficiency improvements and low-carbon heating in residential buildings, aligned with Scotland's ambitious targets. This will require a combination of incentives and regulation, including using tenancy and ownership changes as trigger points for change. Policies should also factor in the UK Government's proposals for a market-based mechanism for low-carbon heat. **Primary responsibility**: Scotland	We aim to consult during 2023 on proposals to inform a Heat in Buildings Bill from which, once passed, we will then be able to deliver the regulations which will contain and influence/reflect these aspects.

#	Recommendation	Response
R2022-384	Consult on and finalise plans for delivering energy efficiency improvements and low-carbon heating in non-residential buildings. These should include clear target dates for meeting standards. Consider the role of targets that look beyond EPCs to more reliable measures of performance and emissions reductions, and clarify whether Scotland will be part of the UK performance-based rating scheme for non-residential buildings. **Primary responsibility**: Scotland	We aim to consult during 2023 on proposals to inform a Heat in Buildings Bill, which will include consultation on powers to develop and introduce strengthened regulation for non-domestic buildings, to ensure they reduce demand for heat where feasible and install a zero-direct emissions heating supply. This follows our previous call for evidence looking at possible different approaches – a specified improvement measures-based approach, a minimum standards approach and an operational ratings approach (based on actual direct emissions).
R2022-388	Publish the delayed monitoring and evaluation framework for the Heat in Buildings Strategy, or expand the set of indicators in the annual climate change plan monitoring reports. Include clear indicators for deployment of energy efficiency measures, heat pumps, and low-carbon district heating, across residential and non-residential buildings. Use the development of the framework to identify data gaps and make plans to address them. Track implementation and its costs and use this information in updates to the Strategy. **Primary responsibility**: Scotland	We will publish a Monitoring and Evaluation framework in 2023 to help measure progress against our *Heat in Buildings Strategy.*
R2022-400	Work with the UK Government to develop a policy and funding framework to retrofit existing EfW plants with CCS from the mid-2020s, and ensure any new EfW plants are all built 'CCS-ready'. **Primary responsibility**: Scotland	Many of the necessary legislative and regulatory levers needed to support decarbonisation of the Energy from Waste sector through Carbon Capture, Usage and Storage are reserved. Scottish Government will continue to work constructively with, and indeed push, the UK Government to ensure the Scottish Cluster has the certainty it needs to continue its development,

#	Recommendation	Response
		including the development of a policy and funding framework to retrofit Energy from Waste Plants where feasible. National Planning Framework 4 (NPF4), now in effect, policy 12 'Zero Waste' only supports energy-from-waste facilities under very limited circumstances. In defined circumstances, the policy is clear that proposals will be supported by a heat and power plan which gives consideration to methods to reduce carbon emissions of the facility, for example, through carbon capture and storage.
R2022-402	Increase transparency around Government's expected pathways to Net Zero. This should involve publishing more details on the assumptions that underpin these pathways and how the abatement set out in the Scottish Climate Change Plan update will be achieved by planned policies, setting out the quantified abatement expected to be achieved by each policy. **Primary responsibility**: Scotland	The next *Climate Change Plan*, due in draft in November this year, will contain the costs and benefits of policies within the plan. Our draft *Energy Strategy and Just Transition Plan* sets out a vision for a future net zero energy system. It has been informed by a programme of independent work and analysis (Project Ninian) to better understand our energy requirements as we transition to Net Zero.
R2022-403	Map out interdependencies between reserved and devolved powers and how they might impact decarbonisation in all economic sectors, and use the results to identify significant risks to the delivery of Net Zero and construct a plan to manage them. **Primary responsibility**: Scotland	The Scottish Government remains determined to work closely and plan with the UK Government on these interdependencies with respect to climate change, but it requires active and sustained cooperation between all parties. As part of the draft *Climate Change Plan*, due November 2023, the SG will set out what emissions reductions require the exercise of UK Government powers and we will continue to work closely – and press the UK Government – on the exercise of the necessary powers.

#	Recommendation	Response
R2022-406	Provide detail on how post-CAP agricultural subsidies and schemes in Scotland will target funding and delivery for climate mitigation alongside wider environmental goals such as climate change adaptation and biodiversity. **Primary responsibility**: Scotland	To deliver the ambitions set out in the Scottish Government's Vision for Agriculture, published in March 2022, Scotland will have a support framework that delivers high quality food production, climate mitigation and adaptation, and nature restoration. The second edition of the Agricultural Reform route map was published on 22 June 2023. It contains more information on what will change from 2025. It makes clear that our transition will be a just one - some things won't change before a new framework for support is implemented beyond 2026. We are committed to integrating enhanced conditionality of at least half of all funding by 2025, then from 2026 we intend to introduce a new mechanism which will see future support payments linked to the contribution farmers and crofters make in delivering our climate and nature objectives.
R2022-410	In parallel with the Convention of Scottish Local Authorities, address the question of what aspects of Net Zero central and local government are responsible for and how these will be coordinated. As well as sharing local best practice, this should lead to a clearer shared understanding of roles and responsibilities which can be communicated across local government. **Primary responsibility**: Scottish Government	The Scottish Government are bringing forward a draft of the next Climate Change Plan by November 2023 which will set clear asks for all of the main actors on delivering climate policy. In addition, we are working closely with COSLA and Local Authorities on the development of a framework to accelerate and coordinate joint action in support of this agenda, with a view to presenting this before the end of the year.
R2023-004	Set out policies or support to capture methane emissions from landfill sites, in addition to improving the monitoring of emissions. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.

#	Recommendation	Response
R2023-005	Set out how Wales's pathway for reducing emissions in the waste sector will be achieved - including policies, funding/investment needs and provision, and any dependencies or implications for other UK nations. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-012	Start reporting emissions from Energy from Waste (EfW) as a separate source within national greenhouse gas inventories. **Primary responsibility**: DESNZ	The Department for Energy Security and Net Zero publish annual statistics on the UK greenhouse gas inventory including summary tables and a dataset with a detailed breakdown of emissions sources. Emissions from the combustion of municipal solid waste can currently be identified from the dataset using the 'activity' column. In addition, we are currently reviewing the 'National Communication' sector breakdown reported in the summary tables of the statistics and intend to separate municipal solid waste combustion from other fuel combustion in statistics published from February 2024.
R2023-018	Monitor EV uptake in Wales and assess whether there are opportunities for further policies and incentives to drive adoption forward more quickly than through the ZEV mandate alone. This should consider opportunities to maximise emissions savings and deliver co-benefits for Welsh people. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.

#	Recommendation	Response
R2023-020	Develop and publish a full delivery plan for how to realise the ambition of reducing per-person car demand by 10% by 2030. This should include consideration of how measures that limit car usage will interact with those that enable more sustainable modes. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-027	Continue to work with the UK Government on industrial decarbonisation in Wales, formally requesting some specific support measures, including for the adoption of CCUS and hydrogen in the South Wales Industrial Cluster. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-029	Work with local authorities to develop an agreed framework of what aspects of Net Zero central and local government are responsible for and how these will be coordinated. This should lead to a clearer shared understanding of roles and responsibilities which can be communicated across local government. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-034	Urgently address the funding gap for new land management actions in the farmed landscape for the year 2024, between the Glastir Scheme ending in late 2023 and the new Sustainable Farming Scheme	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a

#	Recommendation	Response
	beginning in 2025, to ensure delivery does not lose momentum. **Primary responsibility**: Welsh Government	response to the points raised by the report and lay it in the Senedd later this year.
R2023-039	Develop a detailed plan for decarbonising buildings and reaching Net Zero targets, incorporating data from Local Area Energy Plans. The plan should include estimates of investment requirements and yearly targets for deployment of low carbon heating and energy efficiency measures. It should identify policy areas which are under Welsh Government control and those which require coordination with the UK Government. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-040	Fully assess the level of investment required to decarbonise social housing and make long-term plans for delivering the funding required. Evaluate the cost effectiveness of retrofitting social housing to reach an EPC ‘A’ rating, and review the proposed target. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-041	Fully assess the level of investment required to decarbonise public buildings and make long-term plans for delivering the funding required. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.

#	Recommendation	Response
R2023-054	Implement a strategy to address non-financial barriers to achieve annual tree-planting rates of at least 4,500 hectares/year in Wales by 2030, rising to 7,500/year by 2035. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-056	Where possible, publish an estimate of the additional abatement expected from the 'unquantified' plans listed in the Carbon Budget Delivery Plan (CBDP). For example, the emissions savings from transport modal shift proposals can be quantified, but were classified as unquantified in the CBDP. This is needed for a full and fair assessment of whether the Government's would achieve targets. **Primary responsibility**: DESNZ	Wherever possible, quantified emissions savings have been published in the Carbon Budget Delivery Plan. In some cases, emissions savings cannot be quantified until the available evidence has been more thoroughly assessed. Teams across Government are actively working to develop the evidence and analysis associated with these currently unquantified proposals and policies. Nevertheless, plans for meeting carbon budgets can include a mix of quantified and unquantified proposals and policies.
R2023-058	The Government's annual reporting on progress on progress towards Net Zero should be improved by: (1) explicitly comparing historical data against Government milestones and clearly stating where areas are on or off track, which reports to date have not done; (2) enhancing the suite of indicators tracked by drawing on the CCC's Monitoring Framework; and (3) making this accessible to the public, for example by leveraging the existing cross-government data portal (climate-change.data.gov.uk), as recommended in the Skidmore Review. Progress on addressing climate change should be presented with a level of clarity comparable with the COVID-19 pandemic (coronavirus.data.gov.uk).	Government recognises the benefit in publishing public reports and opening itself to scrutiny. That is why there are many existing mechanisms to regularly scrutinise the Government's performance on net zero, including by Parliamentary Select Committees such as the Public Accounts Committee, independent bodies such as the National Audit Office, as well as an annual commitment under the Climate Change Act to respond to Climate Change Committee (CCC). *The Net Zero Strategy* also committed the Government to report annually on 24 commitments. These are reported on in the *Net Zero Growth Plan* as part of Powering u*p Britain*. We will continue to keep our public reporting under review as we progress on the pathway to net zero and look at metrics such as success

#	Recommendation	Response
	Primary responsibility: DESNZ	indicators where it is possible to align with other bodies such as the CCC.
R2023-059	Work with other departments and the ONS to fill the data gaps identified in the CCC's Monitoring Framework (www.theccc.org.uk/publication/ccc-monitoring-framework), with a focus on those the CCC have flagged as high priority. **Primary responsibility**: DESNZ	The Government acknowledges the importance of the Climate Change Committee's Monitoring Framework and the need to collaborate with other departments, the Office for National Statistics, and the Climate Change Committee to address data gaps. The Department for Energy Security and Net Zero works with others to improve net zero-related data collection and reporting across government. We will continue to report and build upon those success indicators that were first outlined in the *Net Zero Strategy* as part of future Progress Reports.
R2023-060	Work with other departments and the ONS to fill the data gaps identified in the CCC's Monitoring Framework (www.theccc.org.uk/publication/ccc-monitoring-framework), with a focus on those the CCC have flagged as high priority. **Primary responsibility**: DfT	The Government acknowledges the importance of the Committee for Climate Change's (CCC) Monitoring Framework and the need to collaborate with other departments, the Office for National Statistics, and CCC to address data gaps. The Department for Transport works with others to improve net zero-related data collection and reporting across government.
R2023-061	As part of strengthening the regulatory baseline, introduce regulations under the Clean Air Strategy to reduce enteric methane emissions, specifically under environmental permitting to the dairy and intensive beef sectors. **Primary responsibility**: Defra	The *Environmental Improvement Plan* set out the Government commitment to consult on extending environmental permitting to dairy and intensive beef farms.
R2023-062	Mandate the addition of methane-inhibiting additives to feed products for UK beef and dairy systems.	Defra considers that methane suppressing feed products are an essential tool to decarbonise the agricultural sector. We are

#	Recommendation	Response
	Primary responsibility: Defra	committed to working with industry to stimulate the market and encourage uptake of these products. In England, we plan to incentivise the uptake of high efficacy products with proven safety once suitable products enter the market (expected to be from 2025). We will work closely with industry to explore the best approach to introduce incentives, which could, for instance, include advice, guidance and support for the development and use of products on farms through our farming schemes such as through the Farming Innovation Programme, the Animal Health and Welfare Pathway our Environmental Land Management schemes, or a new bespoke scheme. Our ambition remains to develop a mature market and mandate the use of safe and effective products in suitable cattle systems in England as soon as feasible and at the very latest by 2030. In Northern Ireland the Future Agricultural Policy will support the on-farm testing of methane inhibiting feed additives. Scottish Government is considering policies to recognise appropriate uptake of methane supressing feed products by livestock farmers.
R2023-063	Set out a consistent and robust approach to support farmers to carry out on-farm monitoring, reporting and verification of agricultural and land-based GHG emissions. This should include support to interpret and take action to deliver emissions reduction based on the results.	In the *Powering Up Britain: Net Zero Growth Plan*, Defra committed to developing a harmonised approach to measuring carbon on farms. By the end of this year, the Department will set out what it will do to increase confidence in carbon audit tools, including how the methodological coherence of these tools can be improved going forward, and how it will support farmers to understand their emission sources, through carbon

#	Recommendation	Response
	Primary responsibility: Defra	audits, and decarbonise their businesses, including through Environmental Land Management schemes. From June 2024 a sustainable farming advice service will be offered to accelerate adoption of carbon audits. The service will provide joined-up advice on sustainable farming and include technical advice and support in a range of ways. We recognise that this is a critical enabler for more farmers to access private finance from carbon and nature markets and demonstrate emissions reductions to the downstream supply chain. The British Standards Institution also published their High Integrity Standards Framework for UK Nature Markets in July 2023, as part of the UK Nature Investment Standards Programme sponsored by Defra, outlining plans to embark on standards development using an accelerated timetable for natural carbon amongst others. To help inform delivery of these commitments, Defra has commissioned research looking at the sources of divergence between commonly used carbon audit tools to help identify opportunities for greater harmonisation. We recently published our response to the call for evidence on monitoring, reporting and verifying GHG emissions on-farms through the UK-ETS consultation. We are utilising these findings and reviewing policies across Devolved Administrations, other countries, and the private sector to develop high ambition policy, driving better data to promote action to decarbonise agricultural supply chains.

#	Recommendation	Response
		In Northern Ireland the Future Agricultural Policy will support the delivery of a Northern Ireland farm carbon benchmarking programme. Scotland is continuing to support mechanisms/initiatives that communicate, educate and demonstrate benefits of mitigation and adaptation measures.
R2023-065	Build on current research and innovation funding streams, such as the Farming Innovation Programme, to specifically target measures that aim to reduce agricultural greenhouse gas emissions via productivity improvements. **Primary responsibility**: Defra	Defra's evidence budget funds research and development on the productivity and sustainability of agriculture and reviews, updates, and develops the evidence base underpinning the net zero pathway for agriculture. We are also supporting Research & Development for climate smart farming through Defra' £270 million Farming Innovation Programme, significant UKRI investments (this includes Land Use for NetZero at £20 million and Transforming Food Production at £90 million), and international partnerships with the Global Research Alliance and with European partners on feed additives, the bioeconomy, and lower impact production systems. Through the Farming Innovation Programme, farmers, growers, and foresters in England can apply for funding to develop innovative methods and technologies which will achieve productivity enhancements and emissions savings. The £226 million Farming Investment Fund provides grants to farmers to invest in new equipment, technology and larger scale on-farm solutions to aid businesses growth whilst increasing farm productivity and sustainability.
R2023-067	Northern Ireland should formalise its 2021 - 2040 draft peatland strategy. This should include policy and delivery	The Department of Agriculture, Environment and Rural Affairs has finalised the draft *Northern Ireland Peatland Strategy* in readiness for presentation to an incoming Minister. The

#	Recommendation	Response
	mechanisms to conserve and restore Northern Irish peat soils under both land and agricultural use. **Primary responsibility**: Northern Ireland	publication and implementation of the *Northern Ireland Peatland Strategy* will provide a framework for the conservation and restoration of peatland in Northern Ireland. Implementation of the strategy will also play an important role in the Department's work in relation to climate change and the wider Green Growth agenda. The Northern Ireland *Climate Action Plan 2023-2027* will contain targets for peatland restoration, which are aligned to advice received from the Climate Change Committee.
R2023-068	Promote consistent annual reporting of national peatland restoration action across the UK, ensuring that data are comparable and openly accessible. **Primary responsibility**: Defra	Defra currently has a number of information gaps in relation to UK peatland - where it is, what condition it is in, and the scale of actions taken to restore it. Defra is developing tools to help close these information gaps. These include two openly accessible products due in 2025: an improved baseline map of England's peatland and a Peat Restoration Register. The Peat Restoration Register will capture data on restoration action across England, including past and current restoration activities. The data captured within the Peat Restoration Register is designed to be comparable with peat data captured across the UK. This will enable more accurate reporting on peatland restoration progress and contribute to the UK Greenhouse Gas Inventory annual reporting cycles. Scottish annual reporting is published via the Peat and Action data mapping tool which can be found at https://www.nature.scot/climate-change/nature-based-solutions/peatland-action-project/peatland-action-data-research-and-monitoring/peatland-action-data-mapping-portal

#	Recommendation	Response
R2023-070	Improve monitoring and reporting of the national extent and condition of hedgerows to track delivery against the Government's commitment to restore and create these boundary features. Government should also set a target and take steps to monitor and report the delivery of agroforestry measures. **Primary responsibility**: Defra	Defra has committed to support farmers to create or restore at least 30,000 miles of managed hedgerows by 2037, increasing to a total of at least 45,000 miles of additional managed hedgerows by 2050 returning hedgerow lengths in England to 10% above the 1984 peak (360,000 miles), as well as restore degraded hedges across the country. The Department also aims to support planting silvoarable agroforestry on 10% of all arable land by 2050. Agroforestry planting will also contribute to the delivery of our statutory target to increase tree canopy and woodland cover to 16.5% of the total land area in England by 2050. The Department will be putting in place an appropriate monitoring framework to track progress against these targets. Farm woodlands/agroforestry contribute to Scotland's wider tree planting targets with data published in Woodland Statistics. Future agricultural support from 2025 onwards will be evidence-based and deliver on targeted outcomes for biodiversity gain and low emissions production.
R2023-074	Scrutinise the plans of water companies to ensure these include appropriate measures to reduce wastewater emissions in line with the Government pathway and sector targets, and set out the key measures being taken alongside performance against relevant KPIs on an annual basis. **Primary responsibility**: Ofwat	Since 2021-22, Ofwat has required water companies to report on operational greenhouse gas (GHG) emissions attributable to the provision of water and wastewater services. For PR24, Ofwat are proposing to incentivise companies to deliver on net zero, in line with government targets, through introducing operational GHG emission performance commitments for water and wastewater. Ofwat's net zero principles paper sets expectations that companies reduce their GHG emissions in line with government targets. Ofwat have provided funding for monitoring and research into net zero via their innovation fund

#	Recommendation	Response
		and 'Green Recovery' decisions. For Price Review (PR) 24, Ofwat intends to expand its innovation fund and expects companies to deliver GHG emissions reductions through base funding, with companies needing to take account of the GHG emissions impacts of enhancement activity to identify 'best value' solutions. Where there are primary drivers to reduce operational GHG emissions companies will be able to apply for net zero challenge funding.
R2023-076	Take action to reduce the electricity costs of industrial users. This should start with greater exemptions for policy costs and network charges, but further measures will be needed to bring the electricity price closer to the gas price. **Primary responsibility**: DESNZ	In the *Powering Up Britain* publication of March 2023, the government accepted the recommendation from the *Independent Review of Net Zero* in committing to outline a clear approach to gas and electricity price rebalancing by the end of 2023/24 and make significant progress affecting relative prices by the end of 2024. We are working to develop our approach to rebalancing and will provide further information in the coming year. We recognise that UK industrial electricity prices are high and are committed to supporting Energy Intensive Industries (EII) who face the highest costs. Since 2013 we have provided over £2 billon to EIIs to make electricity costs more competitive. In February 2023 we announced the British Industry Supercharger, reducing energy costs for key UK industries. The measures consist of a full exemption for renewable electricity policy costs and capacity market costs and support for network changes, aiming to be introduced in 2024-25.
R2023-077	Set out the Government's approach to ensuring electricity networks have the capacity to meet increased demand from industry.	Government published the *Electricity Networks Strategic Framework* in August 2022 setting out plans to transform the network. Government is working with Ofgem and network

#	Recommendation	Response
	Primary responsibility: DESNZ	companies to ensure there is enough capacity to meet increased industry demand. Ofgem's Accelerating Strategic Transmission Investment decision accelerates £20 billion worth of transmission projects to ensure there is adequate capacity. For distribution networks, Ofgem has allocated £22.2 billion to expand capacity, including £3.1 billion for strategic network upgrades to anticipate new demand. Through their Future Systems and Network Regulation and Future of Local Energy Governance consultations, Ofgem will ensure the network is strategically upgraded in anticipation of new demand. They also propose a Regional System Planner that would oversee cross-vector energy planning to ensure the network is expanded in the right places. Nick Winser, the Electricity Networks Commissioner, delivered recommendations to government in July to halve transmission network delivery timescales. Government will respond with an action plan this year.
R2023-078	Introduce specific funding for research and development in industrial electrification. **Primary responsibility**: DESNZ	Innovation in electrification is currently supported through the £1 billion Net Zero Innovation Portfolio Industrial Fuel Switching programme. Any further funding for electrification is subject to future spending reviews. The Government recognises that there are several barriers to fuel switching to electricity, including a requirement for further technology innovation and demonstration. A Call for Evidence seeking evidence on these barriers and possible solutions was launched in July 2023. This seeks

#	Recommendation	Response
		views on how potential market failures can be addressed, including through additional investment. Subject to business case approval, we will extend the Industrial Energy Transformation Fund (IETF) to 2028, providing up to £185 million in grant funding in Phase 3 to help industry identify and deploy decarbonisation technologies within their industrial processes. IETF support can help offset the upfront costs of electrifying industrial equipment and accelerate the commercialisation of novel technologies by supporting studies and permanent deployment of technologies which may have only previously been proven at lab scale.
R2023-079	Provide greater levels of funding for industrial electrification consistent with the support available for hydrogen and CCS. Funding should support the additional operational and capital costs of electrification in manufacturing. **Primary responsibility**: DESNZ	The Government recognises that there are economic barriers to fuel switching to electricity. In July 2023, Government published a Call for Evidence on fuel switching to electrification, which includes questions on these barriers and possible policy solutions. On capital costs, the Government provides support for fuel switching (including electrification) through the Industrial Energy Transformation Fund (IETF) and the Scottish IETF, which provide grants to help with the capital costs of installing or retrofitting industrial equipment associated with electrifying industrial processes. On operational costs, the Government has committed to outlining a clear approach to gas and electricity price rebalancing by the end of 2023/2024, and aims to consult in Autumn 2023 on reforms to the (non-retail) electricity market

#	Recommendation	Response
		as part of the Review of Electricity Market Arrangements (REMA) programme. These policies could change the economics of electrification for industry, and any impacts will need to be considered when designing future electrification policy. Any further funding for electrification is subject to future spending reviews.
R2023-081	Publish details of the £20 billion spending commitment for CCUS, including what it is to be spent on and how much is earmarked for different types of CCUS. **Primary responsibility**: DESNZ	Our objective is to leverage the unprecedented £20 billion of funding to store as much carbon and create as many jobs as possible through Track-1 and beyond. The allocation of funding to different projects and sectors is subject to the outcome of negotiations. We expect it to crowd-in billions of pounds of additional private capital as our private partners also commit to the programme, creating jobs and bringing investment to our industrial heartlands.
R2023-082	Strengthen requirements for suppliers to demonstrate suitable Net Zero targets, plans and actions as part of forthcoming changes to Public Procurement. This includes incorporating Net Zero criteria within procurement contracts, broadening the scope of contracts covered by requirements beyond the current £5 million threshold and introduce metrics to monitor the emissions-performance of key suppliers and contracts. **Primary responsibility**: DESNZ	The UK Government has shown strong leadership and action to bring sustainability requirements into the commercial process, and was the first in the world to require suppliers bidding for major contracts to publish their greenhouse gas (GHG) emissions and a Net Zero target. The new Procurement Bill allows contracting authorities to take into consideration a range of matters when establishing what they want from goods, services and works and structuring their procurements. This includes provision for environmental considerations in the delivery of those goods, services and works. In addition to that freedom, the Bill requires contracting authorities to have regard to the National Procurement Policy Statement (NPPS), which may require them in turn to consider

#	Recommendation	Response
		national priority outcomes in their procurement, which could include tackling climate change. Beyond the NPPS, environmental factors and social value are a feature of many policy and legal obligations outside of the Bill. In relation to social value, the Public Services (Social Value) Act 2012 requires contracting authorities procuring services to consider how that procurement might improve the economic, social and environmental well-being within the area which will be covered by the resulting contract. This must be carried out prior to commencing the procurement process, and Central Government must evaluate Social Value where it is relevant, proportionate and non-discriminatory under Procurement Policy Note 06/20. In relation to net zero, Procurement Policy Note 06/21 requires suppliers bidding for government contracts valued at £5 million or more per annum to publish a 'Carbon Reduction Plan' which includes annual GHG emissions reporting and commitment to achieving net zero emissions by 2050. The UK is the first country in the world to make such a requirement, and the Cabinet Office continues to work with the Public Sector and industry to increase the sustainability of public procurement.
R2023-083	Address key barriers preventing SMEs from effectively responding to Net Zero, specifically: requiring landlords to provide relevant energy-use information to tenants and empowering public institutions (such as Local Authorities and development banks) to provide more low-cost green finance to SMEs.	The Government is committed to support SMEs to effectively respond to Net Zero; including plans for a digital energy advice service and pilot energy assessment and grant scheme. Sharing of energy use data between commercial landlords and tenants is complex with a range of data privacy considerations. The Government encourages SME landlords and tenants to

#	Recommendation	Response
	Primary responsibility: DESNZ	collaborate and utilise recent policy changes that enable organisations (and authorised third parties) to freely access energy use data from suppliers. We continue to monitor evidence in this area and explore overlaps with other policy developments. The Government has offered its support to Bankers for Net Zero's Project Perseus. This aims to unlock access to capital for UK SMEs by delivering a common framework and market-operational solution to automate GHG reporting. Additionally, the UK Business Climate Hub has a dedicated function for SMEs to find existing green finance options in their geographical area.
R2023-084	Implement without further delay key measures presented in the updated Green Finance Strategy, specifically: an internationally aligned Green Taxonomy, Solvency UK and a mechanism to track investment flows. **Primary responsibility**: DESNZ	Government is progressing with implementation of key measures set out in *Mobilising Green Investment: 2023 Green Finance Strategy*. This includes working towards our aim to consult on a UK Green Taxonomy in Autumn 2023, legislating to give full effect to Solvency UK by year end 2024, and working with external researchers to develop our Landscape of Climate Finance (LCF) research which will track investment flows from public and private sources of finance into net zero sectors.
R2023-085	Continue to collaborate with business through the Net Zero Business Investment Group and appoint a Net Zero champion for business to drive private sector action in the UK. **Primary responsibility**: DESNZ	We will continue to collaborate with senior business, investment and finance leaders through the renamed Net Zero Council, co-chaired by Minister Stuart and Shirine Khoury-Haq, CEO of Co-op. The Council supports the delivery of our net zero target by working to identify and secure existing and future economic opportunities for the UK. Its objectives include:

#	Recommendation	Response
		• Working to ensure business sectors have a pathway to net zero, including looking at the barriers and connections across sectors • Leading a systematic review of the financing challenges and the respective roles of government, industry and the financial sector in addressing them • Identifying key challenges facing SMEs up and down the country in reducing their carbon footprints and supporting their transition with new information and advice The Council addresses the appetite from the business and finance communities to strengthen their partnership with UK government to deliver on net zero and capture the benefits of this transition in the UK. It is the primary vehicle driving action to reduce emissions across the private sector at this stage and so supersedes the need to appoint a Net Zero champion.
R2023-086	Publish a strategy that sets out how the UK Government will achieve the abatement from industrial energy efficiency committed to in the Carbon Budget Delivery Plan. **Primary responsibility**: DESNZ	The UK Government intends to publish a strategy for industrial energy efficiency in due course. In the meantime, schemes such as the Industrial Energy Transformation Fund (IETF) and the Business Energy Advice Service Pilot will provide support for energy efficiency measures. We consulted in Summer 2023 on the future of the IETF, collecting views on how government could most effectively target barriers to energy efficiency investment. Responses to the IETF consultation will feed into future strategy development.
R2023-087	Confirm the long-term future (e.g. to 2040) of energy efficiency measures such as the Climate Change Agreement scheme and the Energy Savings Opportunity Scheme, or suitable replacements.	A two-year extension to the current Climate Change Agreements scheme was announced in March 2023 to ensure continuity of support for businesses and we are currently negotiating new targets with sectors. We sought views and evidence to inform our thinking on a potential longer-term

#	Recommendation	Response
	Primary responsibility: DESNZ	scheme to follow the extension through a consultation which closed in May 2023. A decision on any future scheme will be made in due course.
R2023-089	Develop policies for decarbonising smaller industrial facilities, focused on those not covered by the UK ETS and/or not in an industrial cluster. **Primary responsibility**: DESNZ	The UK Emission Trading Scheme (ETS) covers dispersed industrial facilities who exceed a 20MW threshold, incentivising their emissions reduction through a 'cap and trade principle' whereby a cap sets the total amount of carbon that can be emitted and, as it decreases over time, will make a significant contribution to how we meet our Net Zero 2050 target. Dispersed sites have received capex funding for energy efficiency and deep decarbonisation projects under the Industrial Energy Transformation Fund (IETF): 70% of successful IETF applications came from dispersed sites, equating to around £130 million in grant funding. In terms of roll-out of decarbonisation network infrastructure to dispersed sites, the government has committed to setting out a vision for the Carbon Capture Utilisation & Storage sector later in 2023 that will support our net zero ambitions and raise investor confidence. The *Powering Up Britain* announcement included plans for a dedicated energy advice service for SMEs and plans for a pilot offering subsidised energy assessments and grants for energy efficiency measures. The Local Industrial Decarbonisation Plans competition will provide up to £5 million support for dispersed industrial manufacturers to start their journey towards a low-carbon future.
R2023-090	Set out a long-term pathway for the UK ETS cap beyond 2030. **Primary responsibility**: HMT	The UK Emissions Trading Scheme (ETS) Authority has confirmed the UK ETS cap will be aligned to net zero from 2024 going forwards. It is a long-term policy that aligns with the Government's long-term goals.

#	Recommendation	Response
		As such, the Government accepted the recommendation given in the Independent Review of Net Zero that it set out a long-term pathway for the UK ETS beyond 2030. The Government will work within the ETS Authority to do so by the end of 2023. Subject to agreement within the UK ETS Authority, this pathway will confirm that: • The Government will explore expanding the scheme to more sectors of the economy including high emitting sectors. • The Government intend to legislate to continue the ETS beyond 2030 until at least 2050. The cap will remain aligned with our net zero targets, giving the private sector the certainty needed to invest in decarbonisation.
R2023-091	Publish a detailed timeline specifying each stage of the process of CCS development for Tracks 1 and 2 of the CCUS Cluster Sequencing Programme from now through to first capture and storage of CO2 in each cluster and sector, including completion of engineering design, contracts and permitting, construction and commissioning, and publish a plan of how the Government will ensure this timeline aligns with their planned first capture dates for each cluster and sector. **Primary responsibility**: DESNZ	To avoid any risks of jeopardising ongoing Track-1 negotiations before contract signing, and in consideration of the imperative to uphold commercial confidentiality, Track-1 deems it unadvisable to publish the timeline and plan, as per the recommendation. Given the early stage of development of Track-2 and the uncertainties regarding its full scope, as well the need to retain commercial confidence of detail it does possess, it is highly probable that Track 2 will not be able to satisfy the recommendation put forward as well.
R2023-094	Clear expectations should be set for any new oil and gas installations to electrify from the outset wherever viable, with platforms that cannot be immediately electrified being be built fully ‘electrification-ready’, and required to	The North Sea Transition Authority (NSTA) already expects all new operations to be ‘electrification-ready’ or already electrified where technically feasible to do so. For some new developments it can be challenging to source electricity

#	Recommendation	Response
	electrify as soon as possible. In line with our Sixth Carbon Budget advice, all new oil and gas platforms should have no direct emissions from operational energy use by 2027. If this is to be deliverable, swift and co-ordinated action will be required to address barriers, including around grid connections and consenting pathways. **Primary responsibility**: NSTA	immediately, due to location or conditions for turbines. Therefore, to deliver on net zero and energy security, the NSTA is likely to require that facilities be electrification ready from day 1, allowing it to efficiently connect to an electricity source once available. Existing platforms and those in development are already being supported by DESNZ to deliver electrification via retrofitting their platforms to integrate with offshore wind or the onshore grid and deliver as soon as possible; long lead times for these projects means that the 2030 target is already very ambitious.
R2023-095	Targets for methane flaring and venting should be strengthened and brought forward. For all facilities that will remain in operation post 2030, flaring and venting should only be permitted beyond 2025 when necessary for safety reasons. **Primary responsibility**: DESNZ	Government and industry have already committed through the North Sea Transition Deal, to eliminate routine flaring and venting by 2030. Furthermore, in its Methane Action Plan, industry has committed to a 50% methane emissions reduction by 2030.To these aims, major retrofits to facilities are expected to be operational between 2025-2030. Accelerating or broadening existing targets is likely to lead to early cessation of production and further reliance on shipped gas with almost four times the emissions. The North Sea Transition Authority has comprehensive guidance and effective consenting policy. It expects flaring and venting at the lowest possible levels, zero routine flaring and venting for all by 2030, with new developments approved on this basis. Operators that exceed consents face fines. North Sea Transition Authority data shows that North Sea flaring is down 50% since 2018 including a 13% drop last year.
R2023-096	Publish a delivery plan for the decarbonisation of oil and gas infrastructure, as part of, or alongside, an offshore	The Government’s view is that the decarbonisation targets in the North Sea Transition Deal to reduce emissions from

#	Recommendation	Response
	industries integrated strategy. As recommended by the Skidmore review, Government should publish an offshore industries integrated strategy. As part of, or alongside this, a delivery plan should be published for the decarbonisation of oil and gas infrastructure, including a timetable for electrification and the phase-down of production. This should include more ambitious decarbonisation targets (well beyond the 50% target set out in the North Sea Transition Deal), roles and responsibilities, a plan for how decarbonisation will be regulated (e.g. minimum emission-intensity standards) and incentivised, how barriers will be addressed (including around connections, planning and consenting), and sequencing. **Primary responsibility**: DESNZ	operations to 50% of 2018 levels by 2030 are already very ambitious and will help to significantly reduce emissions, ultimately ensuring that the UK Continental Shelf reaches net zero by 2050. The North Sea Transition Authority holds industry to account by tracking and monitoring its emissions and compliance with the targets in the Deal. It drives reductions by robustly managing performance, including through the annual stewardship survey, monitoring and benchmarking, tier reviews and publishing new and updated guidance. A specific delivery plan for decarbonisation would be duplicatory of this existing work and it is not clear therefore how it would add value. The Prime Minister has also tasked the relevant Government departments and regulators to work collaboratively and report back by the end of the year on how we can make the best use of our offshore resources in a truly integrated way as we unlock CCUS and hydrogen opportunities in the North Sea. This work will support our future approach to integration of energy and energy transition in the UKCS.
R2023-097	Finalise funding mechanisms and allocate funding to support the development of 10 GW of low-carbon hydrogen production by 2030, ensuring these are designed to limit residual and upstream emissions, but also reflect hydrogen costs in a way that does not bias towards hydrogen where electrification is competitive. **Primary responsibility**: DESNZ	We are working at pace to finalise funding mechanisms and allocate funding to support our up to 10GW hydrogen production capacity ambition. In August 2023, we published the Hydrogen Production Business Model (HPBM) contract – the Low Carbon Hydrogen Agreement (LCHA). We aim to announce successful projects that will be offered HPBM contracts and Net Zero Hydrogen Fund grants through the first electrolytic hydrogen allocation round in Q4 2023, and through the cluster sequencing process for CCUS-enabled projects

#	Recommendation	Response
		from 2024, subject to matters such as due diligence and negotiations.
R2023-098	Accelerate the development of new business models for hydrogen transportation and storage infrastructure, with a view to keeping options open for larger scale hydrogen use by 2030. **Primary responsibility**: DESNZ	The *British Energy Security Strategy* made a commitment to design new business models for hydrogen transport and storage (H2 T&S) infrastructure by 2025, an already ambitious timeline. Government has published a consultation on these business models, and recently responded to this consultation setting out its minded-to position for their high-level designs. A further update on the design of these business models is expected by the end of this year. Government has taken on board previous stakeholder feedback about accelerating development of these business models and has already introduced provisions in the Energy Bill intended to support the design of these new business models by 2025. The H2 T&S business models are being designed with a view to encouraging the development of hydrogen T&S infrastructure that can support a range of end-uses, including increasing use in industry, power, transport and potentially heat.
R2023-099	Government should clarify its 2030 10 GW hydrogen production commitment in TWh/year and review whether this target is sufficient to meet future demands. Pending the outcome of this, strategic decisions may be needed around the scale of hydrogen use across sectors, or to adjust the level of the target. **Primary responsibility**: DESNZ	We will be setting out more details on the future development of UK low carbon hydrogen production later this year in response to the recommendation made in the *Independent Net Zero Review*, led by Chris Skidmore MP, to publish a ten-year hydrogen production delivery roadmap. This roadmap will incorporate the period of our 2030 up to 10GW hydrogen production capacity ambition and reflect the various levels of hydrogen demand we could see beyond this date.
R2023-100	Government should help facilitate conditions that stimulate investment to contribute to emissions reduction in the agricultural and land use sectors, including habitat creation and restoration, through promoting policy	The Government's policy framework for nature markets, published March 2023, sets out the approach to accelerate growth of private investment into nature.

#	Recommendation	Response
	stability and good governance to attract private investment. This will include detail on how private funding will be aligned with public subsidies, and promote the use of existing verifiable standards (such as the Woodland Carbon Code and Peatland Code) whilst also considering the need to develop new ones. **Primary responsibility**: Defra	In this framework, the Government committed to consult later in 2023 on further interventions needed to grow high integrity voluntary nature and carbon markets. The consultation will explore the market governance needed to provide market participants with confidence in standards produced under the British Standards Institution's (BSI) UK Nature Investment Standards Programme and other international programmes. Our Natural Environment Investment Readiness Fund supports innovation to develop a pipeline of investible nature projects and methodologies which can help to operationalise markets for natural capital. Such approaches, once operational, are expected to evolve as standards develop as part of the BSI Programme, ensuring projects are consistently demonstrating high integrity principles. Government continues to explore the design of Environmental Land Management schemes and other grant schemes to strengthen compatibility with private investment. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's Future Agricultural Policy, through Farming with Nature will incentivise the restoration of farm habitats. Scotland's agricultural vision and support framework will deliver biodiversity gain and climate mitigation and adaption outcomes. Scottish Government is supporting emissions reductions through afforestation and peatland restoration and encouraging high-integrity private investment through carbon codes.
R2023-101	Adopt in UK legislation existing baseline land management rules (e.g. cross compliance rules) which	There are already a range of regulations in the UK's domestic baseline which work together to provide mitigation benefits

#	Recommendation	Response
	offer mitigation benefit. This is to ensure sustainable land management approaches are adhered to irrespective of whether voluntary schemes (e.g. ELMs) are being accessed. **Primary responsibility**: Defra	either by encouraging more efficient resource use or improving animal health, for example the Farming Rules for Water and Nitrates regulations. We are working closely with industry and Defra group regulators to ensure clear, effective regulation that delivers environmental outcomes, including climate change mitigation. This is supported by a comprehensive advice service which supports farmers to comply with regulatory requirements. These projections will continue to apply after the end of Cross Compliance in 2024 and the minimum standards that farmers and land managers must meet to protect the environment will not significantly change. We have recently published a Rules for Farmers navigation page, to help farmers understand what they need to do to comply with domestic regulation. We launched a consultation on protecting hedgerows from 28 June to 20 September 2023, seeking views on the best way to maintain and improve existing hedgerows protections, as well as our approach to enforcement and what the future of hedgerow protection could look like. The result of this consultation will inform our next steps to ensure regulation works for wildlife, the environment and for farmers. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's Future Agricultural Policy will establish new Farm Sustainability Standards to replace current cross compliance standards in Northern Ireland. Scotland’s Agriculture Bill provides a framework to enable the delivery of the Government’s Vision for Agriculture.

#	Recommendation	Response
R2023-103	The UK Government and devolved administrations should build on their current advice and guidance approaches and set out their understanding on how the transition to Net Zero in the agriculture and land use sectors will affect employment in these sectors. This should include a timeframe of change and the scale of impact, to inform how pathway will be managed to be fair and equitable. New skills, training and advice should be made widely available to facilitate the transition, increase capacity and enable farmers to make changes on the land they manage, while supporting the achievement of environmental targets in these sectors. **Primary responsibility**: Defra	Building on extensive evidence and analysis, Defra is changing the approach to information, guidance and advice. This will better support agriculture/land use sectors undertake and successfully deliver more complex land management options, contribute to net zero, and deliver our environmental targets within a sustainable, resilient business model. We are delivering this by: working with industry leaders in knowledge exchange to understand how we can jointly develop and improve the skills and confidence of land managers; targeting advice to when and where it is most needed, focusing government advice to improve outcome delivery, error reduction and scheme uptake; building capacity and capability in non-government advisers to enable them to meet the sectors needs and deliver our objectives at scale; and removing barriers to access through free business support for farmers and land managers under the Farming Resilience Fund during the agricultural transition period and capital grants to procure adviser support. Department of Agriculture, Environment and Rural Affairs of Northern Ireland's Future Agricultural Policy Programme will encourage low carbon farming through incentivisation and knowledge transfer. Scotland’s Land Use and Agriculture Just Transition Plan will focus on people’s livelihoods, skills, and wellbeing.
R2023-104	Identify current and future skill gaps in the aviation workforce and address them to ensure the right skills are developed and available in the sector to help achieve aviation decarbonisation.	We recognise the aviation sector will have to adapt its skills to achieve Jet Zero. As set out in Flightpath to the Future, we are supporting the sector to develop the skills it needs for the Jet Zero transition. As part of Generation Aviation – the UK’s world-leading aviation skills programme that is helping to

#	Recommendation	Response
	Primary responsibility: DfT	enable this transition – we commissioned independent research into the future skills needs of the aviation sector. This research (expected Autumn 2023) examines the skills barriers to fully realising the benefits of emerging aviation technologies, including to support decarbonisation. We will continue engaging with industry and the Department for Education to understand the future skills needs of the aviation sector, and will explore what additional, aviation-focused research on future skills could help support industry in preparing for the future, including to support decarbonisation aims.
R2023-106	Finalise details of the power BECCS business model and launch a process for applications, ensuring consistency with other mechanisms such as the future engineered removals business model and any import standards outlined in the upcoming Biomass Strategy. **Primary responsibility**: DESNZ	We are continuing to develop the power bioenergy carbon capture and storage (power BECCS) business model. We are engaging with stakeholders both internally and across the sector to gather further evidence, develop our design and ensure coordination across government of all business models. The power BECCS business model will require projects to adhere to strict sustainability criteria. The recently published Biomass Strategy confirmed our intention to strengthen sustainability requirements and develop a cross-sector framework, subject to consultation in 2024. We remain committed to our ambition to deploy at least 5MTCO2/yr of engineered removals by 2030 and further development of CCUS through the Track-2 process which will establish 2 new clusters. We will set out the process by which capture projects for Track-2 will be selected in due course. We will also launch a process later this year to begin further expansion of the Track-1 clusters, beyond the initial deployment, identifying and selecting projects to fill the

#	Recommendation	Response
		available storage and network capacity anticipated to be available in and around 2030.
R2023-107	Clarify whether engineered removals projects are eligible for support as part of the expansion of Track 1 clusters and set out a timeline for this expansion. **Primary responsibility**: DESNZ	Projects brought forward under the power BECCS business model will be required to adhere to strict sustainability criteria related to their feedstock fuel. The sustainability criteria has been updated in the recently and re published Biomass Strategy.
R2023-108	Set out plans for soliciting public views on engineered removals. These plans should cover both education and engagement, ensuring that the public understand and are comfortable with the need for, benefits and potential risks of using these technologies to deliver Net Zero in the UK. **Primary responsibility**: DESNZ	As detailed in *Net Zero Growth Plan*, Government will set out further details on how it will increase public engagement on net zero, through developing a roadmap and a guiding framework, in conjunction with partners and trusted messengers. As set out in the *Net Zero Strategy*, we recognise Government is only one voice in many when it comes to climate change, and the public looks to businesses, charities, scientists and others for advice and support. We recognise the importance of understanding public views on engineered GGRs. We will continue to consider how best to collate these views and determine next steps. In August the Department for Energy Security and Net Zero published the Role of biomass in achieving net zero: public dialogue alongside the Biomass Strategy, which outlined participants views on using biomass, including through BECCS, as a negative emissions technology in achieving net zero
R2023-109	Develop alternative plans for meeting the 2030 NDC in case of delays to abatement and removals that rely on CCS. These plans should outline measures that can achieve emissions reductions in three years or less and include conditions for progress on CCS that will be used	UK Government is continually engaging with industry and analysing programmes to see how the 2030 Nationally Determined Contribution targets can be met or exceeded and where government policy can support this. The expansion of Industrial Energy Transformation Fund, the industrial electrification call for evidence and the upcoming call for

#	Recommendation	Response
	to determine whether these contingency measures are progressed. **Primary responsibility**: DESNZ	evidence on non-road mobile machinery (NRMM) decarbonisation options demonstrate the commitment to accelerate and expand on our resource efficiency energy efficiency (REEE), and industrial fuel switching targets. We remain committed to decarbonisation in line with the 2023 *Carbon Budget Delivery Plan*.
R2023-110	The UK should announce intent to withdraw from the Energy Charter Treaty given the insufficient reach of the reforms secured in 2022, the risks associated with remaining in the Treaty and the bargaining power that could be associated with a critical mass of exiting parties. **Primary responsibility**: DESNZ	The UK has been a strong advocate for modernisation to align the Treaty with modern energy priorities, international treaty practice and commitments on climate change. However, there is now no clear route for modernisation to progress. The UK will therefore be reviewing its membership of the Energy Charter Treaty and will take a decision on next steps if modernisation is not adopted by November. This will consider the positions of other Contracting Parties, and views of stakeholders in business, civil society and parliament, to inform an appropriate response.
R2023-112	Fully assess the level of investment required to decarbonise fuel poor homes and make long-term plans for delivering the funding required. **Primary responsibility**: Welsh Government	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.
R2023-113	Assess and transparently communicate the impact that reductions in the amount of ODA available for international spending have had on international mitigation, adaptation and nature programming, setting out contingency plans for ICF programming to cover the eventuality that similar cuts are made in the next financial year.	The Foreign, Commonwealth and Development Office (FCDO) is committed to transparency with the public and predictability with our partners. On 17 July 2023 the FCDO published its A*nnual Report and Accounts* which included planned programme allocations for 2023/24 and 2024/25, split by country. We remain committed to meeting our commitments on tackling climate change, including spending £11.6 billion of

#	Recommendation	Response
	Primary responsibility: FCDO	International Climate Finance between financial years 2021/22 and 2025/26.
R2023-114	Produce a Written Ministerial Statement in advance of COP28 outlining the UK's priorities for the summit and for the conclusion of the Global Stocktake. **Primary responsibility**: DESNZ	As recommended, we will lay a Written Ministerial Statement in advance of COP28 outlining the UK's priorities for the summit and for the conclusion of the Global Stocktake.
R2023-115	Building on the high-level intention expressed in the 2030 Strategic Framework, the Government should produce detailed, high-ambition climate and nature trade principles that commit to: protecting the UK's right to regulate to achieve its Net Zero and Paris Agreement commitments; minimum environmental standards for imports; tariff-free trade for environmental goods; taking steps to eliminating inefficient fossil fuel subsidies and requiring credible Net Zero targets and plans from any FTA partners. **Primary responsibility**: DBT	The Government recognises the vital role that multilateral and bilateral trade can play to progress the UK's climate and nature commitments, as set out in the *2030 Strategic Framework*, published March 2023. The UK has included commitments that protect our right to regulate and encourage high levels of environmental protection in our Free Trade Agreements (FTAs). We have taken action to remove barriers to green trade and to promote tariff-free trade for environmental goods, such as via the UK Global Tariff, which removed tariffs on over 100 green goods. The UK has also been a longstanding supporter of multilateral efforts to reform the use of inefficient fossil fuel subsidies, including at the WTO. We are committed to introducing world-leading legislation for forest risk commodities through the Environment Act. This will help to tackle illegal deforestation in UK supply chains by preventing the use of key forest risk commodities produced on land illegally occupied or used. Following COP26, over 90% of world Gross Domestic Product (GDP) is now covered by net zero targets, including most of

#	Recommendation	Response
		our FTA partners. Our agreements also seek to reaffirm each Parties' international climate and environment commitments, including the Paris Agreement.
R2023-116	Confirm when the Jet Zero Strategy will undergo its first five-yearly review and begin work in 2023 to understand what policy framework or mechanism would need to be in place for additional measures within the sector to be rapidly deployed in the late-2020s if the Government is not on track to meet its aviation pathway. These measures could include demand reduction policies. **Primary responsibility**: DfT	We will monitor progress against our emissions reduction trajectory on an annual basis from 2025, with a major review of the Strategy and delivery plan every five years. The first major review will be in 2027, five years after publication of the Strategy in 2022. The *Jet Zero Strategy* sets out details on how the aviation sector can achieve net zero without government intervening directly to limit aviation growth. DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits. If we find that the sector is not meeting the emissions reductions trajectory, we will consider what further measures may be needed to ensure that the sector maximises in-sector reductions to meet the UK's overall 2050 net zero target.
R2023-117	Start to track the carbon-intensity of, and demand for, different aviation ticket types (e.g. business, first class, economy class), and demand for private flying, to help understand how demand-side measures could reduce the carbon intensity of flying. **Primary responsibility**: DfT	The Government is opposed to creating new taxes to discourage flying and taking holidays, as laid out in the Prime Minister's speech on 20th September. The Department is deepening its evidence base on demand for private flying to support wider environmental ambitions which will also benefit the UK economy and safety. The Department for Transport recently commissioned independent research to establish a baseline of carbon emissions emitted by the General Aviation (GA) sector, which includes business aviation. However, we are keen to develop and track data over a period of time, exploring new data sources for measuring the carbon intensity private flying;

#	Recommendation	Response
		and building additional insight from the data sources that we already have access to.
R2023-118	The Sustainable Aviation Fuel mandate should include provisions to ensure that eligible fuels do not have a harmful non-CO2 impact relative to conventional jet fuel and that the minimum GHG emissions saving threshold is sufficiently ambitious to ensure the Government's aviation emissions reduction trajectory is reached. The threshold should be increased over time to ensure high future emissions savings while upholding stringent fuel eligibility standards. **Primary responsibility**: DfT	In the Government's response to the first Sustainable Aviation Fuel (SAF) mandate consultation, we are scoping a research programme on the non-CO2 impacts of aviation, with SAF to form a key area of exploration. In the second consultation on the SAF mandate we proposed an increasing the minimum GHG savings threshold. We proposed a lower savings threshold in the early years of the mandate, to support investment in the SAF sector as production technologies are developed and refined. However, we propose that the savings threshold will increase as the carbon intensity of SAF decreases over time. We will ensure that the proposed SAF mandate trajectories and greenhouse gas savings thresholds align with our aviation decarbonisation ambitions set out in the Jet Zero strategy. The government will publish its response to the second SAF mandate consultation, confirming our position on minimum greenhouse gas emissions savings and our final trajectories, by the end of 2023.
R2023-119	Build contingency measures into the Sustainable Aviation Fuel Mandate to prepare for the possibility of constrained domestic and global Sustainable Aviation Fuel feedstock and import supply throughout the 2020s and 2030s that does not overly rely on the SAF mandate buy-out mechanism. **Primary responsibility**: DfT	We recognise there is uncertainty around feedstock availability and continue to work closely with colleagues across government to ensure that the most up-to-date evidence and modelling is reflected throughout the policy design of the SAF mandate. We will align the SAF mandate feedstock availability modelling with the recently published Biomass Strategy and the upcoming Low Carbon Fuels strategy. This will provide us with

#	Recommendation	Response
		greater certainty on our target trajectory. The government will confirm its final trajectory in the government response to the second SAF mandate consultation by the end of 2023. Once the legislation is introduced, we will keep the mandate under review, to ensure our ambitions to decarbonise aviation are met.
R2023-120	Outline the role zero-emission aircraft will play in the Government's aviation decarbonisation pathway after 2030 and how Government will provide an enabling environment (regulation, infrastructure, public acceptance) for these new technologies. **Primary responsibility**: DfT	The Department for Transport published the *Jet Zero Strategy* in July 2022, the Strategy's high-ambition scenario projects that zero-emission aircraft will provide 27% of air-traffic movements and 4% of CO2 abatement by 2050, generally on short- and medium-haul flights up to 2050. 9–19-seater hydrogen fuel cell aircraft are expected to enter service in the mid-2020s, whilst Airbus expects to deliver a zero-emission aircraft for commercial use routes by 2035. The Jet Zero Council has a zero-emission flight Delivery Group (ZEF DG) considering infrastructure, regulation, and commercialisation. The ZEF DG's two-year action will focus on delivering Council goals, addressing barriers to commercialisation, and engaging with industry to support outputs from the Aerospace Technology Institute's (ATI) Hydrogen Capability Network (HCN); the HCN is considering UK hydrogen supply for domestic aerospace manufacturing. A DfT-commissioned independent review into regulatory body the Civil Aviation Authority's (CAA) effectiveness was published in July 2023.
R2023-121	Complete legislative changes for inclusion in the Carbon Budgets of international aviation and shipping from the Sixth Carbon Budget onwards.	We will legislate for the inclusion of International Aviation and Shipping emissions in the Sixth Carbon Budget at the earliest opportunity, subject to Parliamentary scheduling.

#	Recommendation	Response
	Primary responsibility: DESNZ	
R2023-124	Ensure that large-scale unabated biomass power plants are converted to BECCS as early as feasible, and are not given extended contracts to operate unabated at high load factors beyond 2027. **Primary responsibility**: DESNZ	As set out in the recently published *Biomass Strategy*, Government intends to further develop biomass uses to support the decarbonisation of the power sector and the achievement of carbon budgets. As part of this Government is facilitating the transition from unabated biomass generation to power Bioenergy with Carbon Capture and Storage (BECCS). There is ongoing work in Government to support the deployment of BECCS as soon as possible. We are progressing work on both a Power BECCS and a Greenhouse Gas Removal (GGR) business model to enable a portfolio of GGR technologies to deploy at commercial scale in the UK this decade, subject to affordability value for money and carbon storage availability. Government is also working closely with electricity generators currently using biomass to facilitate their transition to power BECCS, subject to value for money, taking account of energy security on the road to net zero.
R2023-125	Ensure new gas plant are genuinely CCS- and / or hydrogen-ready as soon as possible and by 2025 at the latest. **Primary responsibility**: DESNZ	We are actively developing policy proposals which would meet this recommendation. In March 2023, we consulted on updated Decarbonisation Readiness (DR) proposals would require new build and substantially refurbishing combustion power plants to be built in such a way that they can easily convert to either 100% hydrogen firing or retrofit carbon capture, within the plant's lifetime. The updated requirements would ensure new build combustion plants are in the best position to take advantage of future decarbonisation opportunities as the hydrogen and carbon capture and storage economies expand.

#	Recommendation	Response
		We intend to publish a Response and any required legislative changes in Autumn 2023.
R2023-127	Develop a long-term cross-sectoral infrastructure strategy to adapt and build, respectively, the distribution of liquid and gaseous fuels, electricity, CO_2 and heat networks over the next decade. This should be led by DESNZ, drawing on the advice of the FSO and building on the findings of the forthcoming National Infrastructure Assessment. It must have a view to facilitating Net Zero while ensuring climate and weather resilience. A key aim should be to inform and narrow the decision space for future decisions on hydrogen use. **Primary responsibility**: DESNZ	The Government is committed to meeting the UK's long-term infrastructure needs. The *National Infrastructure Strategy*, published in 2020 sets out plans to transform UK infrastructure to level up the country, strengthen the Union and achieve net zero emissions by 2050. Work to develop a cross sectional infrastructure strategy requires a high level of consultation and co-development from across several government departments. This includes the Department for Energy Security and Net Zero (DESNZ) who leads energy infrastructure and CCUS, the Department for Levelling Up, Housing and Communities who leads planning; and the Cabinet Office who are modelling spatial planning alongside work by HM Treasury and the National Infrastructure Commission. These departments will need to consider an approach and timing of any potential updates to our national infrastructure strategy, while working with stakeholders from industry, local government and other public bodies such as Ofgem and the Future System Operator. DESNZ are consulting on a series of resilience roles and responsibilities for the Future System Operator (FSO) that will include advising on the development of resilience standards for climate and weather resilience. These roles and responsibilities will be mandated in the License Conditions for the FSO. The Government is separately considering whether to enable blending of up to 20% low carbon hydrogen (by volume) into the current gas distribution networks, to support development of the hydrogen economy. The Government is aiming to reach a strategic policy decision in 2023, subject to the outcomes of

#	Recommendation	Response
		economic and safety assessments and wider strategic considerations.
R2023-130	Publish the second transitional Centralised Strategic Network Plan, identifying the strategic investments required for a decarbonised and resilient electricity system in 2035 and delivery of Net Zero. Provide a robust treatment of uncertainty and sufficient, clear information for network development projects to be advanced in a timely manner. Ensure such projects are designed to be resilient to a changing climate. **Primary responsibility**: FSO	The Electricity Systems Operator (ESO) has already published the first Transitional *Centralised Strategic Network Plan (TCSNP)* in July 2022. This represented a significant change to the way in which the network is planned and developed, helping to ensure the network is planned ahead of need in support of a decarbonised power system. In December 2023, the ESO will publish the second TCSNP. This will include reinforcements needed to support a decarbonised power system, including the connection of significant volumes of offshore wind included in the Holistic Network Design Follow Up Exercise. However, it is likely that further reinforcements not yet identified in the second TCSNP will be needed to enable a fully decarbonised power system. These will be identified in subsequent *Centralised Strategic Network Plans*. The importance of climate resilience in the design and development of projects is included in the *National Policy Statement for Energy Networks Infrastructure.*
R2023-131	Work closely as part of a Minister-led infrastructure delivery group, and in conjunction with the new Electricity Networks Commissioner, to ensure enabling initiatives for energy infrastructure are taken forward at pace and necessary policy changes are implemented in Wales, to deliver a decarbonised and resilient power system by 2035. Wales's spatial planning regime should adequately balance local impacts on natural capital with the need for sufficient electricity network capacity, delivered in a timely fashion, to accommodate expansion of renewable	In June, the CCC published a progress report on reducing emissions in Wales that contained many recommendations for the Welsh Government, including those listed in the UK progress report. The Welsh Government will prepare a response to the points raised by the report and lay it in the Senedd later this year.

#	Recommendation	Response
	electricity generation capacity in line with UK Government targets and Welsh Government ambition. **Primary responsibility**: Welsh Government	
R2023-132	Develop detailed policies to achieve the level of abatement from resource efficiency set out in the Carbon Budget Delivery Plan, including measures to both reduce consumption and improve the resource efficiency of production. **Primary responsibility**: DESNZ	Work has continued throughout 2023 on a joint Department for Energy Security and Net Zero and Department Environment, Food & Rural Affairs research project that investigates the potential to unlock carbon savings from resource efficiency measures. This considers 11 industrial sectors, ranging from heavy industry to consumer product manufacturing. The final report will be published in 2024. The research will support the development of evidence-based resource efficiency policies that will deliver carbon savings in industry, building on the strategic framework outlined in the 2023 'Maximising Resources, Minimising Waste' programme and Carbon Budget Delivery Plan. Resource efficiency policy development will consider the full product value chain, across production, consumption and end-of-life stages, seeking to deliver a sustainable abatement pathway that supports wider decarbonisation and environmental goals. This will complement policies, such as revisions to eco-labelling and product standards, aimed at encouraging consumers to make green choices.
R2023-133	Publish details and timelines on the maximising resources and minimising waste programme in England. **Primary responsibility**: Defra	*Maximising Resources Minimising Waste* was published on 28 July 2023. The programme sets out details and timelines for action to manage resources and waste in accordance with the waste hierarchy.
R2023-134	Establish a Centre for Smart Shipping (CSmart) as promised in the Technology and Innovation in UK	The Department for Transport is currently working on preparations for launching a new competition, such as CSmart,

#	Recommendation	Response
	Maritime report (part of Maritime 2050 Route Map). The centre should increase the adoption of technology in the UK maritime sector and work on developing a UK legislative framework for autonomous vessels, incorporating the as yet unpublished results from their 'Future of transport regulatory review: maritime autonomy and remote operations' consultation which closed in November 2021. Any new framework for autonomous vessels should include consideration of low-carbon fuels and operations. **Primary responsibility**: DfT	and is exploring funding options, including via UK SHORE, that will continue to develop after London International Shipping Week 2023.
R2023-135	Provide support and incentives to drive private-sector investment in low-carbon maritime fuels, engine technologies, and storage facilities. For example, this should include support and incentives to better understand the viability of different low-carbon fuels such as the sustainability of supply and carbon emissions for methanol. These should enable low-carbon fuels to expand to 42% of total domestic shipping fuel use by 2035 to match the deployment assumptions in the CBDP. **Primary responsibility**: DfT	There are several pathways already in place or scoped out to support the investment and uptake of low carbon maritime fuels including: • UK SHORE is a £206 million R&D programme which works in partnership with industry focusing on technologies necessary to decarbonise the domestic maritime sector. • As part of the refreshed Clean Maritime Plan, we will set out our policies which will increase the use of low carbon maritime fuels. More broadly, the Department for Transport is developing a Low Carbon Fuels Strategy to be published in 2023 on low carbon fuels deployment across different transport modes in the period to 2050 to further support investments in low carbon fuels.
R2023-136	In line with the terms of reference, the UK Shipbuilding Skills Taskforce (UKSST), UKSST should produce a Shipbuilding Skills Strategy with recommendations and a	The UKSST report is an independent industry report which was published during London International Shipping Week 2023.

#	Recommendation	Response
	SMART action plan by June 2023, with implementation of actions taking place between June and December 2023 (as outlined in UKSST TOR). **Primary responsibility**: DfE	This report contains a set of recommendations that fall under four main priorities: 1. Leveraging and enhancing the existing skills system; 2. Promoting shipbuilding as a vibrant and inclusive sector; 3. Ensuring shipbuilding skills are fit for the future; and 4. Collaborating on shipbuilding skills. The recommendations are targeted at industry, education and training providers, and government, and aim to ensure the sector can tackle skills shortages in the short and longer term. Following the launch of the report, government will consider and respond to the government-focused recommendations. Alongside this, ongoing work to ensure the skills system is able to respond to the changing skills needs of industry will continue, supporting the sector to address future skills needs influenced by the introduction of new technology and net-zero requirements.
R2023-139	Through the Review of Electricity Market Arrangements, develop a strategy as soon as possible on market design for the medium to long term for a fully decarbonised, resilient electricity system in the 2030s and onwards. It is essential that in introducing changes to market arrangements, this is done in a way that does not deter the investment required to deliver a decarbonised system by 2035. **Primary responsibility**: DESNZ	We continue to work at pace to deliver the Review of Electricity Market Arrangements (REMA). In *Powering Up Britain*, we announced that we aim to publish our second REMA consultation in Autumn 2023. Our aim for the second consultation is to set out a direction of travel, next steps and support a smooth transition to any new arrangements over time, so that the market can continue to support investment at pace, improved consumer outcomes,

#	Recommendation	Response
		and a decarbonised electricity system (subject to security of supply) by 2035.
R2023-140	Establish proactive monitoring mechanisms for delivery against the ZEV mandate, to enable early identification of areas where further supporting policy measures may be needed to address shortfall risks or harness opportunities to boost delivery. **Primary responsibility**: DfT	The Government is committed to ensuring the Zero Emission Vehicle (ZEV) mandate delivers on its objectives. The Government will be setting up an administrator tasked with delivering and monitoring the impact of the regulation, working closely with stakeholders across UK Government and Devolved Administrations. The Mandate will be kept under continuous review to understand impacts on the transition to ZEVs. Key focuses will include impact on ZEV uptake, the efficacy of Special Purpose Vehicle, Wheelchair Accessible Vehicle, and car club credits, and the impact of flexibilities. Monitoring output will be used to inform policy across Government, notably in the drafting of the 2031-35 regulations.
R2023-141	Set out an ambitious definition of 'significant zero-emission capability' to cover which cars and vans will be permitted to be sold between 2030-2035, ideally allowing only fully electric vehicles. **Primary responsibility**: DfT	The Government has confirmed that new non-zero emission cars and vans sold in the UK between 2030 and 2035 (when all new cars and vans must be fully zero emission) will no longer be required to offer drivers a significant zero emission capability (SZEC). The ZEV mandate continues to require 80% of new cars to be zero emission by 2030. At the time the SZEC requirement was announced, in December 2020, there appeared to be a clear difference in the CO2 emissions performance between some hybrid and plug-in hybrid technologies and normal petrol and diesel cars. However, since then further research has shown that this is not always replicated in the real world, especially if some plug-in hybrids are only infrequently plugged in. There is therefore little benefit in artificially restricting manufacturers’ technology choice, and in doing so limiting the

#	Recommendation	Response
		choice of models available for consumers in this period for what will be a small and declining share of new cars and vans. Instead, carbon savings (and fuel costs savings for consumers) could be achieved by requiring manufacturers to improve the efficiency of their new non-zero emission fleet but allowing them the freedom to choose how to deliver this. We will engage with industry on the successor arrangements for that period.
R2023-142	Work with supportive stakeholders to agree a definition of what a sustainable and ethical EV supply chain should look like, and investigate ways (e.g. certification) of requiring this for vehicles sold in the UK. **Primary responsibility**: DfT	The Government is aware of the social, environmental and supply concerns surrounding the mining of raw materials for battery electric vehicles and is working to address these. The UK government has consistently supported the UN Guiding Principles (UNGPs) on business and human rights, which are widely regarded as the authoritative international framework to steer practical action by Governments and businesses worldwide on this important agenda. In response to the UNGPs, the UK produced a National Action Plan (NAP). We are clear we expect all our businesses to comply with all applicable laws; identify and prevent human rights risks; and behave in line with the Guiding Principles - including their management of supply chains here and overseas. As an active member of the Organisation for Economic Cooperation and Development (OECD), the Government encourages states and those working in the industry to implement the OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. The Faraday Institution participates in the Global Battery Alliance – a World Economic Forum initiative seeking to accelerate action towards a socially responsible, environmentally sustainable and innovative battery value

#	Recommendation	Response
		chain. Proposed actions to reduce environmental impact include switching to renewables, creating a circular economy to reduce primary production, and sustainable development strategies for local communities.
R2023-143	Work collaboratively with Ofgem, distribution network operators and local government to develop a clearer and simpler process for delivering new and upgraded connections to the electricity grid. This process should include consideration of local demand forecasts to allow planning ahead to avoid bottlenecks, considering demand for both public charging stations and electrification of van and HGV depots. **Primary responsibility**: DfT	Government is working collaboratively with Ofgem and distribution network operator's (DNO)s to develop a more strategic approach for delivering new and upgraded connections. For example, through their Future Systems and Network Regulation and Future of Local Energy Governance consultations, Ofgem looks to ensure that the network is strategically upgraded in anticipation of significant new demand, such as Electric Vehicle chargepoint stations and heavy-good vehicle depots, that require new or upgraded connections. They also propose a Regional System Planner that would be responsible for cross-vector strategic energy planning with input from key stakeholders such as local government. Additionally, the current distribution investment cycle allocates £3.1 billion for strategic network upgrades. It incentivises DNOs to forecast new demand on their networks and plan proactive reinforcements ahead of need. Government will jointly publish a Connections Action Plan with Ofgem shortly, which will ensure that both generation and demand projects can connect to the grid and begin operating faster; enabling low carbon generation and investment to deliver earlier, reducing constraint costs and improving investor confidence in grid capacity. As part of this, we will set out actions improve standards and incentives on DNOs to improve

#	Recommendation	Response
		their overall performance in the connections process and delivery of connections.
R2023-144	Monitor reliability across all public chargepoints, beyond just the rapid network that will be covered by the 99% target, and consider how to intervene to increase this if it does not improve. **Primary responsibility**: DfT	The Public Charge Point Regulations 2023 were laid in Parliament in July 2023. These regulations include a requirement for rapid chargepoints to be 99% reliable, within one year of the regulations coming into force. This will be measured as an average across each chargepoint operators rapid network and information on compliance must be published on their website. The Office for Product Safety and Standards (OPSS) will be the enforcement body to ensure that all parties comply with the regulations to ensure that consumers have a positive experience when using the public charging infrastructure. OPSS will enforce the regulations and apply penalties to the operators in the event of non-compliance.
R2023-145	Once the ZEV mandate regulations for cars and vans are implemented, begin consulting on an appropriate regulatory mechanism for delivering the ZEV transition for heavy-duty vehicles including HGVs and buses. **Primary responsibility**: DfT	Government is committed to phasing out new, non-zero emission heavy-goods vehicles (HGVs) weighing 26 and under by 2035, and all new HGVs sold in the UK to be zero emission by 2040. HGV phase out dates need to be supported by a regulatory framework that enforces these dates and we will consult on the appropriate future regulatory framework to deliver this, in due course. Government has consulted on setting a legal end date for the sale of new, non-zero emission buses, between 2025 and 2032. We will make an announcement on the end of sales date soon, and subsequently the appropriate mechanism for implementation.

#	Recommendation	Response
		Government also held a call for evidence on the decarbonisation of coaches. We will announce next steps in due course.
R2023-146	Produce an infrastructure strategy that sets out how the transition of heavy-duty vehicles to ZEVs will be enabled. The strategy should consider options for depot charging, en-route ultra-rapid charging and hydrogen refuelling infrastructure. **Primary responsibility**: DfT	The Department for Transport is developing a zero emission HGV infrastructure strategy for publication in early 2024. This will set out the respective roles of the public and private sectors and was committed to via the Department's *Future of Freight: a long-term plan* which was published in June 2022. By setting the strategic direction, the strategy will ensure the delivery of the recharging and refuelling infrastructure required to meet the 2035 and 2040 phase out dates for non-zero emission HGVs. The strategy will draw on the expertise of the Freight Council and the Freight Energy Forum, which met most recently on 5 July. The strategy will also work in tandem with the Zero Emission Road Freight Demonstrator (ZERFD) programme, gathering real world evidence on performance of zero emission HGVs and their supporting refuelling and recharging infrastructure.
R2023-147	Increase the ambition of the proposed CO_2-intensity regulations for new non-zero-emission cars and vans, by ensuring that manufacturers are incentivised to reduce vehicle sizes and are not subject to perverse incentives that could restrict the availability of small EVs. **Primary responsibility**: DfT	The objective of the Zero Emissions Vehicle (ZEV) mandate is to send a clear signal to industry to maximise their investments in zero emission technology, rather than continue to require a need to invest in incremental improvements to non-ZEVs. In the past, incremental improvements in these technologies have enabled compliance with regulations but have resulted in little or no reductions in real-world emissions.
R2023-148	Conduct a systematic review of current and future road-building projects to assess their consistency with the	This Government supports motorists. The plan for drivers sets out how government is working to improve the experience of

#	Recommendation	Response
	Government's environmental goals. This should ensure that decisions do not lock in unsustainable levels of traffic growth and develop conditions (which can be included in the Roads Investment Strategy 3 process and beyond) that permit schemes to be taken forward only if they meaningfully support cost-effective delivery of Net Zero and climate adaptation. **Primary responsibility**: DfT	driving and services provided for motorists. We are committed to ensuring that transport plays its part in decarbonising the economy and protecting the environment. National Highways undertake comprehensive environmental impact assessments to establish the likely significant effects of a road project on the natural, built and social environment, to allow consenting authorities to assess a project's consistency with the Government's environment goals and legislation. Clearly in making decisions on the *Roads Investment Strategy 3 (RIS3)*, we will ensure that it is in line with the Government's legal obligations relating to Carbon Budgets, Net Zero, Environment Act 2021 targets and the duty to have regard to the *Environmental Principles Policy Statement*. We have also ensured that "Improved environmental outcomes" is one of six strategic objectives in the *RIS3* process which will shape the initial evidence gathering for *RIS3.* This will conclude in late 2023 with the publication of the draft RIS. As set out in the *Transport Decarbonisation Plan*, the Government will continue to adapt and take further action if needed to decarbonise transport.
R2023-149	Publish guidance to local authorities on what should be covered in local transport plans to deliver on the priorities set out in the Transport Decarbonisation Plan. This should include consistent guidance on how to quantify the emissions reductions that these measures can be expected to deliver as well as long-term clarity on what funding streams will be available to implement plans. **Primary responsibility**: DfT	The Government committed in the Levelling Up White Paper to support all Local Transport Authorities (LTAs) by providing new guidance on Local Transport Plans. This will enable all LTAs to have clear project pipelines and comprehensive strategies to improve local transport for people and reduce carbon emissions*,* alongside improving the experience of driving and services provided for motorists in line with the Plan for Drivers. The Government also committed in the *Transport Decarbonisation Plan* to drive decarbonisation and transport improvements at a local level by making quantifiable carbon reductions a fundamental part of local transport planning and funding. The Government plans to consult on a draft of the LTP

#	Recommendation	Response
		guidance and separate technical guidance on carbon quantification in due course. Future funding arrangements for transport are subject to the outcome of the next spending review.
R2023-150	Restore the funding allocated for active travel at Spending Review 2021. **Primary responsibility**: HMT	This Government has done more than any other when it comes to walking and cycling, and the Department remains committed to the ambitious vision that by 2030 half of all journeys in towns and cities are walked or cycled. Around £3 billion is projected to be invested in active travel over the five years up to 2025, despite the reduction to the dedicated active travel capital budget announced on 9 March 2023. The funding reduction was needed because of factors including inflationary pressures triggered by the impact of the war in Ukraine, and supply chain disruption as the global economy started to recover from the effects of Covid-19. Dedicated active travel funding is only a small piece of a much bigger jigsaw: much of the funding for active travel schemes comes from wider sources such as the City Region Sustainable Transport Settlements and the Levelling Up Fund.
R2023-151	Establish a dedicated unit with specific responsibility for managing cross-departmental risks and dependencies, coordinating cross-cutting actions and holding departments to account for delivery. If the Government intends to achieve this through the establishment of the Department for Energy Security and Net Zero, then it must designate a sufficiently senior unit with dedicated responsibility for delivering this coordinating role and must embed coordination and accountability as key	We recognise the importance of coordinated action across Government departments to ensure there is consistency in policy and decision-making. The Secretary of State (SoS) for the Department for Energy Security and Net Zero (DESNZ) provides senior ministerial representation alongside other Cabinet Ministers. SoS's primary focus alongside energy security, is driving delivery of net zero and maximising economic opportunities, the transition to net zero presents to the UK. The SoS for Department for Energy Security and Net

#	Recommendation	Response
	objectives within the department's Outcome Delivery Plan. **Primary responsibility**: DESNZ	Zero also retains accountability for overall delivery of net zero within this Cabinet structure. The department's officials work with counterparts across government to coordinate action and manage cross-departmental risks, working with Cabinet Office, HM Treasury, Department for Transport and Department for the Environment, Food & Rural Affairs to ensure net zero is embedded in government policy, decision-making and aligns with long-term priorities. The setting of common goals is also achieved through the sector specific public commitments in the recent *Net Zero Growth Plan*, help to drive accountability for achieving net zero in each department.
R2023-152	Review and improve processes for collaboration with the devolved administrations, including by working together to identify opportunities for synergies between UK and devolved delivery plans. **Primary responsibility**: CO & No.10	We collaborate with the Devolved Administrations at all levels to achieve shared goals with respect to net zero. The *Net Zero Strategy* (supplemented by the *Carbon Budget Delivery Plan*) highlights areas of joint co-operation and commitment to UK-wide emission reductions. There is much to be gained from working together and sharing learning where possible for the benefit of people and businesses across the UK, as climate change does not recognise borders. We know that to reach net zero we must take a UK-wide approach. The UK Government and the Devolved Administrations are committed to working together to deliver coordinated policy action to meet respective emissions reduction targets across the UK. We will continue to look for ways to improve how we collaborate with the Devolved Administrations.
R2023-153	The Local Net Zero Forum must address the question of local government powers, capacity, skills and funding to identify gaps and barriers that could hinder the ability of	In the Local Net Zero Forum we are working with local government to discuss a variety of key local net zero policy and delivery issues - including the simplification of funding for

#	Recommendation	Response
	local government to deliver the roles and responsibilities for delivery of Net Zero that the Forum agrees. This should be used to inform development of an evidence-based approach to clearer, simpler and longer-term funding and resourcing of local authority delivery of Net Zero. **Primary responsibility**: DESNZ	net zero at the local level, where this produces the best outcome for net zero. The Forum discussions can support the development of local net zero policy and delivery by both central and local government but the Forum does not make decisions on such issues.
R2023-154	Create a process by which the insights, lessons learned and next steps identified by the Local Net Zero Forum are shared with all relevant authorities and fed back to central government departments. **Primary responsibility**: DESNZ	The Local Net Zero Forum is attended by representatives from seven central government departments and fifteen national membership bodies representing local government, including Mayoral Combined Authorities, unitary authorities, London boroughs, country, district and town councils. Forum discussions can support the development of local net zero policy and delivery by both central and local government but the Forum does not make decisions on such issues. Where appropriate, members of the Local Net Zero Forum are encouraged to share insights with their membership bases.
R2023-157	Undertake and publish research on trends and drivers of increased bioenergy use in industry over the past 15 years, to inform the Government's strategy on biomass use and the policy levers to incentivise best use. **Primary responsibility**: DESNZ	As laid out in the recent *Biomass Strategy*, government is aware of both the recent increased use of bioenergy in industry, and its role in allowing the industrial sector to meet its net zero goals. Whilst we do not currently plan to publish research as described, we recognise the need to continually review the case for further intervention to incentivise the best use of bioenergy in industry. This will be in line with the *Biomass Strategy* priority use framework, and current understanding that use should be prioritised in the long term in combination with Biomass Enabled Carbon Capture and Storage (BECCS) technology to deliver negative emissions, or where there are limited alternatives to decarbonise specific

#	Recommendation	Response
		processes, and in the short and medium term as a transition fuel.
R2023-158	Develop an indicator to track energy efficiency in industry. This might be done by measuring the energy-intensity of a fixed 'basket' of industrial products in a similar way to inflation indices. **Primary responsibility**: DESNZ	To illustrate energy efficiency trends in the UK's industrial sector, the Department for Energy Security and Net Zero publishes annual data on energy intensity across industrial sectors as part of the Energy consumption in the UK national statistics. The Department for Energy Security and Net Zero also tracks energy efficiency as part of performance reporting for Climate Change Agreements (CCA) on eligible energy use for participating businesses. Updated reporting requirements for phase 3 of the Energy Savings Opportunity Scheme (ESOS) will, subject to planned legislation, provide greater insights into the energy efficiency of industrial processes. Qualifying businesses for the ESOS will need to report energy intensity ratios in relation to energy consumed by their industrial processes in the compliance period and report on any energy efficiency measures that they commit to implement. The Department for Energy Security and Net Zero will consider such options for monitoring energy efficiency from industrial processes as part of work exploring improvements to industrial decarbonisation data collection from recommendation R2023-240.
R2023-160	Publish new guidance for government departments for improved targeting of polices aimed at changing behaviours in order to deliver Net Zero and effectively adapt to climate change. This guidance should direct all departments to ensure that the design and promotion of new and existing policies which aim to create behavioural change are targeted at specific 'moments of change/windows of opportunity'. These should be based on well-understood trigger points, such as when	We are determined to adopt a fair and pragmatic approach to net zero that minimises the burdens on working people and avoids imposing significant costs on families. The Government continues to commission institutions to explore how to encourage consumers to take up green choices and what can effectively prompt a consumer and when. Defra conduct a bi-annual survey on food waste attitudes, knowledge, and behaviour that told us that during the first

#	Recommendation	Response
	individuals change house, job or tenancy, remortgage, or engage in home improvements. **Primary responsibility**: DESNZ	lockdown, there was a sharp decrease in reported levels of food waste. This was in part due to people having more time to deploy behaviours known to reduce food waste, for example freezing food and planning meals. The 2021 survey by contrast found that food waste is back in line with the levels recorded in 2018.
R2023-161	Collect further information on societal attitudes in relation to green choices and Net Zero policies via surveys and public dialogue activities. This should include extending questions about everyday behaviours and perceived impact of behaviours assessed in the BEIS Public Attitude Tracker to behaviours around reducing air travel and changing diets. In addition, the government should establish regular assessments of attitudes towards potential Net Zero policy options. **Primary responsibility**: DESNZ	We are determined to adopt a fair and pragmatic approach to net zero. We will not impose significant costs on the British people, such as by making them change their diet by taxing meat or creating new taxes to discourage flying. Government continually seeks public views and attitudes to inform the development of its net zero policies. Examples include the following: • The Department for Energy Security and Net Zero's Public Attitudes Tracker, tracks quarterly, the publics' view on a range of net zero policies, issues, and behaviours. • Department for Energy Security and Net Zero's Community Benefits for Electricity Transmission Network Infrastructure research explores communities' views towards community benefits schemes. • The Energy Efficiency and Net Zero longitudinal survey tender is identifying emerging trends on self-reported uptake of energy efficiency and net zero related behaviours. • The Department for Environment, Food & Rural Affairs and Natural England's Peoples' 'Nature Survey on

#	Recommendation	Response
		Attitudes to the Environment' collects data on the public's behaviours and attitudes around the environment. • The Food Standards Agency's 'Food and You 2' Survey captures, bi-annually, the public views on their eating or food shopping behaviour. The Office for National Statistics' 'Opinions & Lifestyle Survey' regularly collects and publish statistics on individuals' climate change concerns and actions.
R2023-163	Improve the provision of guidance and information to SMEs to understand and respond to Net Zero. This should include: expanding the provision of tailored expert advice to SMEs to reduce their emissions - alongside more general resources such as the SME Climate Hub; and simplifying guidance and resources to inform carbon foot-printing - including establishing a national repository for SMEs and partners to access standardised emissions data. **Primary responsibility**: DESNZ	The UK Business Climate Hub, hosted as a UK landing page on the international SME Climate Hub, has recently been relaunched with more comprehensive, practical and tailored advice on how to reduce emissions. The Hub allows businesses to browse content by sector or theme and also breaks down the latest funding opportunities, organised by geographical area within the UK. From the Hub, businesses can easily navigate to make the SME Climate Commitment on the global site, which allows them to access a growing suite of free, high-quality tools including an emissions calculator, educational course and a reporting tool. A complementary website, the digital non-domestic Energy Advice Service, is also being developed to offer SMEs tailored advice on how they can reduce their energy use specifically. HMG has also recently launched a pilot Business Energy Advice service in the West Midlands offering SMEs subsidised energy assessments and grants for energy efficiency measures.

#	Recommendation	Response
R2023-164	Introduce legal requirements without delay on large private and public companies to report against the Transition Plan framework in full, endorse the ISSB standard and set out how firms transition plans will be assessed for credibility and compatibility with the UK's climate targets. **Primary responsibility**: DBT	The publication of the ISSB's first two standards is a major milestone, and the next phase of work is to assess and decide whether to endorse the standards in the UK for voluntary use. The Government aims to complete our endorsement process by July 2024 and will be assisted by independent recommendations from the UK Sustainability Disclosure Technical Advisory Committee (TAC). The Government will shortly publish a framework document setting out more detail on the UK's process for endorsement. Future decisions taken regarding implementation of the UK endorsed standards within the Companies Act, and within listing rules, would be subject to a public consultation by the UK Government and the FCA, respectively. In April 2022 the Government established the Transition Plan Taskforce (TPT) to develop a framework for companies to communicate transition plans to stakeholders. The TPT intends to finalise and publish its framework in October 2023. The *Mobilising Green Investment: 2023 Green Finance Strategy* committed the Government to consult on the UK's approach to transition plan reporting following the finalisation of the TPT's framework.
R2023-166	Ensure all UK carbon credit codes follow a standardised approach to ensure confidence, consistency and robustness. Soil carbon should be a priority for this, but others under development (e.g. blue carbon and hedgerows) should be considered. **Primary responsibility**: Defra	The British Standards Institution's (BSI) UK Nature Investment Standards Programme, sponsored by the Department for Environment Food and Rural Affairs, was launched in March 2023. This programme aims to support UK markets for ecosystem services by developing a suite of up to ten new investment standards, one of which will be an overarching principles standard with how-to methodologies to demonstrate high

#	Recommendation	Response
		integrity, drawing from the Government's policy framework for Nature Markets. BSI published their High Integrity Standards Framework for UK Nature Markets in July 2023 setting out priority areas for the remaining standards. This report outlines plans for embarking on standards development, using an accelerated timetable, for: natural carbon including above ground, below ground and marine habitats; biodiversity; nutrients; and operational requirements for schemes issuing environmental credits/units. In the autumn, BSI will confirm the remainder of the Nature Investment Standards Programme, following a period of extended engagement to discuss and agree key priorities for standards development.
R2023-167	Build the international evidence base on the impacts on Corresponding Adjustments under Article 6 of the Paris Agreement, including through supporting global initiatives such as VCMI to assess in what country contexts attaching a Corresponding Adjustment can add most value to project additionality and to overall global emissions reduction. **Primary responsibility**: DESNZ	High-integrity carbon markets can play a role in enabling a cost-effective pathway to net zero. To avoid double counting of emission reductions or removals, the Paris Agreement requires corresponding adjustments to be applied when mitigation outcomes are transferred between countries. Through our International Climate Finance, Government provides support for Article 6 implementation, which will help developing countries in deciding on the use of corresponding adjustments. Whilst there is no obligation for corresponding adjustments to be applied in voluntary markets, credits should demonstrate additionality and permanence. Corresponding adjustments can help ensure credits contribute towards increased global emissions reduction, as one of a number of factors for demonstrating additionality.

#	Recommendation	Response
		Government has supported organisations such as the Voluntary Carbon Market Integrity Initiative to build evidence on this issue and will continue to work with partners to shape best practice. Government will provide further detail and welcome views through its forthcoming Voluntary Carbon and Nature Markets consultation.
R2023-168	As part of the Net Zero Skills Action Plan, publish a detailed roadmap of when relevant skills standards, frameworks, and qualifications to net zero will be developed or updated, including a delivery timeline. **Primary responsibility**: DESNZ	Government is focused on the development of the Net Zero and Nature Workforce Action Plan through the Green Jobs Delivery Group. This builds on commitments relating to jobs and skills in the *Net Zero Strategy* and *Net Zero Growth Plan*. This includes working with Institute for Apprenticeships and Technical Education (IfATE) to mainstream support through skills reform programmes, including establishing the Sustainability Framework to align standards with net zero. DfE has delivered the Strategic Delivery Fund and Local Skills Improvement Plans and launched the Local Skills Improvement Fund. Responding to industry demand, the Department for Education continues to grow the English training offer, rolling out HTQs, apprenticeships, and T Levels that support net zero, and investing further in green Skills Bootcamps. Workforce assessments commissioned by the Green Jobs Delivery Group will support this growth by highlighting training gaps. By December 2024, IfATE will have reviewed 217 high priority English apprenticeship standards to align them with the green economy. Meanwhile, IfATE's occupational maps enable learners to see where a green qualification could take their career.
R2023-169	As part of the Net Zero Skills Action Plan, publish a strategy for workers and communities in those areas of the economy affected by industries that are expected to experience job losses as a result of the Net Zero	At the core of our transition to net zero is the creation of new careers within net zero industries (such as Hydrogen) while helping existing industries such as automotive to transition. A Local Sub-Group of the Green Jobs Delivery Group will identify

#	Recommendation	Response
	transition, including by providing reskilling packages and tailored support to transition to alternative low-carbon sectors. **Primary responsibility**: DESNZ	recommendations and actions for central government, local government, industry and business to improve the delivery of green skills, enabling people and businesses across the UK to fully participate in, and benefit from, the transition to net zero. Already, the government has approved 38 Local Skills Improvement Plans (LSIPs), alongside a new Local Skills Improvement fund (LSIF). We will continue to build upon these initiatives to support workers and communities through the transition to net zero.
R2023-170	Develop an overall review of the market price of low-carbon technologies and develop tax and price incentives so that low-carbon options are affordable and cheaper than their high-carbon alternatives, and demand reduction measures are appropriately encouraged. **Primary responsibility**: HMT	The Government recognises the importance of ensuring appropriate incentives are in place to incentivise investment in low-carbon options by making them affordable and cheaper than high-carbon alternatives, and to ease the burden of the transition on households. That is why we have introduced enhanced capital allowances for certain green assets such as electric cars. The UK also has several taxes that have an environment or climate-related objective and are designed to encourage businesses and consumers to make greener choices, including Landfill Tax and the Climate Change Levy. In July 2023 the UK ETS Authority announced the overall emissions cap will be reduced in line with the Government's wider ambitions on net zero from 2024, in line with CCC recommendations. This delivers a robust carbon pricing signal, promoting cost-effective decarbonisation by allowing business to cut carbon where it is cheapest to do so. This year the Government also engaged with industry to carefully consider how best to incentivise businesses to invest in green technologies, to consider whether there is a case for doing more through the tax system or whether other levers are more appropriate. Future decisions for both tax or price support are for the Chancellor, and any changes would be communicated

#	Recommendation	Response
		at a future fiscal event. The government regularly reviews these incentives.
R2023-172	Government should set out its priorities for developing emerging Net Zero industries and technologies in the UK and use the Autumn Statement to put in place strong signals to stimulate their development and deployment. **Primary responsibility**: HMT	The government is committed to developing net zero industries and technologies. These will play a vital role in our economic growth. At the last Spending Review, government committed £30 billion for the green industrial revolution. We have since provided an additional £6 billion for energy efficiency and up to £20 billion of long-term funding for Carbon Capture, Usage and Storage. *Powering Up Britain (2023)* sets out the action government is taking to provide long-term certainty on the government's decarbonisation and green growth plans, to unlock opportunities to invest in and grow net zero industries in the UK. This sets out our deployment goals, business models, and government support for each sector. Green industries remain a key growth sector for the UK economy. Decisions at Autumn Statement 2023 are for the Chancellor.
R2023-173	As part of the action plan for Net Zero skills, the Government should address barriers to employment and training opportunities, especially for under-represented demographics. A lack of diversity in these sectors limits the effective delivery of Net Zero and means people with these characteristics are not included in the opportunities Net Zero brings. **Primary responsibility**: DESNZ	As part of the Green Job Delivery Group's Net Zero and Nature Workforce Action Plan, government and industry will explore further actions to ensure the jobs essential to our green transition are open to everyone, and we remain committed to supporting relevant industry initiatives. In particular, the pilot Power and Networks task and finish group has published a set of head start actions highlighting the need to ensure the accessibility of green and net zero careers. Additionally, the Institute for Apprenticeships and Technical Education (IfATE)

#	Recommendation	Response
		has already begun addressing these issues, publishing the Simpler Skills report in June 2023, which is further complemented by the publication of Institute for Apprenticeships and Technical Education's equality, diversity and inclusivity strategy of March 2023.
R2023-174	Alongside updates to the National Planning Policy Framework, provide clearer guidance on assessing carbon impacts, measuring environmental outcomes and evidence requirements for climate considerations in the definition of 'sustainability'. **Primary responsibility**: DLUHC	The recent *National Policy Planning Framework (NPPF) consultation*, we asked for views on a form of carbon impact assessment. We are interested in whether effective and proportionate ways of deploying a broad carbon assessment exist, including what they should measure, what evidence could underpin them such as Local Area Energy Plans, and how they may be used in a plan-making context or as a tool for assessing individual developments. We will consider policies in a way that protects and supports new development. The consultation closed on 2 March 2023, and we are now considering all of the comments we received and expect to publish an update in the Autumn.
R2023-175	Develop a public-private partnership with a clear definition of responsibilities to help to coordinate action across government, businesses, local authorities, education providers and workers, aiming to grow demand for workers in sectors that are key to the Net Zero transition. **Primary responsibility**: DESNZ	Responding to calls from the Green Jobs Taskforce (in July 2021) for government and industry to work together, in May 2022, the Green Jobs Delivery Group was established to coordinate action and dictate clear plans to grow a green workforce in sectors key to the Net Zero transition. A forum for government and industry, the Delivery Group is driving action on green jobs and skills to ensure workers are supported throughout the transition to a green economy. The Group is headed up by ministers and business leaders, and has a membership comprised of representatives from industry, local government, the skills and education sector, and other stakeholders.

#	Recommendation	Response
R2023-177	Build the evidence for and make transparent the climate impact assessments of major government budgets, spending decisions and spending reviews in coordination with the Office for Budget Responsibility. **Primary responsibility**: HMT	The *Net Zero Strategy* sets out the government's wider approach to meeting its 2050 net zero target, including the role of regulation and private finance. Departments are ultimately responsible for assessing the impacts of their programmes. HMT recognises that it is important to have robust understanding of climate impacts to inform fiscal decisions and that transparency can improve data quality and public confidence in decision making. With this in view, HMT has been developing processes to assess the climate impacts of fiscal decision making and has published information on the climate and environmental impacts of Spending Review 2021. HMT intends to continue to publish climate information on the impacts of future spending reviews. HMT will also continue to improve strengthen the processes for other fiscal events and keep the potential for publication of climate impacts under review. For all potential publications, final decisions will be for HMT ministers.
R2023-178	Ensure that necessary legislation and regulations are in place to commence obligations on boiler manufacturers under the Clean Heat Market Mechanism. **Primary responsibility**: DESNZ	The Government is proceeding with legislating for the introduction of the Clean Heat Market Mechanism through the present Energy Security Bill. Draft scheme regulations are in development and will be introduced to Parliament in due course, ahead of the scheme's launch in 2024.
R2023-179	Continue developing the Government's energy advice service, to provide a comprehensive service to provide households and businesses with advice, access to government schemes, and connect them with trusted suppliers. Refine the service to avoid recommending	The current 'Find ways to save energy in your home' service provides advice to consumers on how to retrofit their homes to make it more energy efficient and sets out all the measures they may wish to install.

#	Recommendation	Response
	measures that have already been installed (such as solar panels and heating controls). Consider including information on the benefits of developing a home retrofit and renovation strategy and obtaining professional advice (such as from a retrofit assessor/designer or architect). **Primary responsibility**: DESNZ	
R2023-180	Ensure that the Government's energy advice service and funding schemes (such as the Boiler Upgrade Scheme and Great British Insulation Scheme) are adequately publicised to ensure widespread take-up. Deliver strategies to signpost households to advice on energy efficiency and low carbon heating at potential trigger points such as buying a property, obtaining a mortgage, or undertaking home improvements. Deliver strategies to target appropriate advice at hard to reach groups and for difficult to treat properties. **Primary responsibility**: DESNZ	The 'Find ways to save energy in your home' service provides homeowners with a clear plan for how they can retrofit their homes. Our digital service will promote funding available to eligible consumers and we are currently running in-person advise services across the country to better understand the complex needs for hard-to-treat homes and harder to reach consumers. We want to continue to support households with this transition and therefore will be extending the Boiler Upgrade Scheme until to 2028, and we will enhance the current marketing campaign to increase consumer awareness and take-up.
R2023-181	Monitor the impact of the Clean Heat Market Mechanism and evaluate its effects on deployment of heat pumps and development of supply chains. Develop contingency plans for other interventions should progress prove insufficient, and develop further options for incentivising uptake of heat pumps beyond the lifetime of the Market Mechanism. **Primary responsibility**: DESNZ	The Government is developing plans for the monitoring and evaluation both of the Clean Heat Market Mechanism specifically and of the heat pump policy framework overall. We will continue to keep the overall policy framework, of which the Clean Heat Market Mechanism is part, under review in order to ensure that it is commensurate to achieving the market expansion that is required over time. This includes exploring what further policy action may be warranted in future years.

#	Recommendation	Response
R2023-182	Urgently update the 'reduced data' Standard Assessment Procedure (RdSAP) to ensure that current emissions factors are used in calculating the Environmental Impact Rating (EIR). Take further steps to improve the reliability of domestic Energy Performance Certificates (EPCs) including: better training and oversight of EPC assessors; reducing reliance on default values in RdSAP; improvements to RdSAP; improvements to the digital presentation of EPC data; and storage and reuse of input data. **Primary responsibility**: DESNZ	The Government is working to update the Reduced data SAP methodology, RdSAP10, following its last update in 2014. RdSAP10 will ensure assumptions are up to date and new technologies are captured in RdSAP. RdSAP10 will see a move away from default values where possible and an update to emissions factors. Changes will largely follow those seen in SAP10.2. We are acutely aware of the importance of RdSAP methodology in producing an accurate EPC and are committed to progressing this update as quickly as possible, which we expect in spring 2024. We will also consider further improvements as part of the SAP overhaul to be introduced alongside the Future Homes Standard. The government is currently working on proposals for improving the reliability, accuracy and accessibility of EPCs through the EPC Action Plan, and intends to consult on reforms to the Energy Performance of Buildings regime in the months ahead.
R2023-183	Reform domestic EPC metrics to make them better suited to informing consumers and delivering policy, taking into account the recommendations made by the CCC in its letter on 2 February 2023. **Primary responsibility**: DLUHC	The Government agrees that the metrics and information provided on Energy Performance Certificates can be improved. The government is currently working on proposals for improving Energy Performance Certificate (EPC) metrics, taking into account the CCC's recommendations, and intends to consult on these in the months ahead. Through the policies considered within the upcoming EPC reform consultation, the government intends to ensure EPCs are more reliable, accurate and considered as trustworthy sources of information for consumers, as well as providing a solid foundation for other energy performance policies.
R2023-184	Provide publicly visible Government support to the hydrogen village trials. Assist local authorities in their role, help to address public concerns and deliver	The government is playing a key role in supporting the development of the proposal for a hydrogen heating trial in Redcar, Teesside. Lord Callanan (Minister for Energy

#	Recommendation	Response
	community backing for the trials, including through direct involvement in public engagement if requested. **Primary responsibility**: DESNZ	Efficiency and Green Finance) visited Redcar in August where he met the Leader and Deputy Leader of Redcar and Cleveland Council, local business leaders and residents in the trial area. Officials have also attended community engagement events and had regular engagement with local representatives to support the understanding of how the trial fits into the government's net zero target and policy on areas of the trial design, such as consumer protection and safety. A GOV.UK webpage was set up in April 2023 to demonstrate the importance of the village trial in supporting government to understand what role hydrogen should play in decarbonising heat. This can be accessed at https://www.gov.uk/government/publications/hydrogen-village-trial-open-letter-to-gas-distribution-networks
R2023-185	Urgently identify and address problems with ECO4, ensuring that the rules of the schemes are realistic, and the scheme delivers the targeted rate of energy efficiency installations. **Primary responsibility**: DESNZ	The latest delivery data shows that installations are increasing each quarter. As a result of the design of the scheme, prioritising the least efficient homes, suppliers have focused delivery on the more expensive EPC band E, F and G and solid wall homes first, in order to meet their sub-obligations. More measures have been installed per home on average than estimated so those households will benefit from larger bill savings. We are working with Ofgem, local authorities and the supply chain to facilitate higher uptake of the Flex mechanism which has led to an increase in the proportion of delivery via that method. Changes to the scheme would require public consultation and regulatory change.

#	Recommendation	Response
R2023-186	Develop energy-related products policies in time to enable implementation by 2025. This should include developing and consulting on policies to decarbonise commercial catering equipment, domestic cooking appliances and garden machinery. **Primary responsibility**: DESNZ	In November 2021, the government published the Energy-related Products Policy Framework which sets out how we plan to push products to use less energy and other resources in order to help achieve Carbon Budgets 5 and 6 and to save consumers money on their energy bills. We recently closed our lighting consultation which sought industry's views on a proposal to increase the minimum energy performance standard for lighting products placed on the Great Britain market from 2023 and again from 2027. Going forward we will be carefully reviewing the body of regulations underpinning Energy-Related Product standards, ensuring they continue to help bring down energy bills, energy demand and carbon emissions whilst supporting innovation and maintaining consumer choice.
R2023-187	Respond to the 2021 consultation by finalising and implementing plans for minimum energy efficiency standards for the non-domestic private rented sector. **Primary responsibility**: DESNZ	We have reviewed the responses to our consultation on minimum energy efficiency standards in the non-domestic private rented sector and are working hard to review the policy design to ensure it remains fair and appropriate for landlords and tenants. We plan to publish this in due course. The proposed timelines within the original consultation will require updating to allow sufficient lead in time for landlords and the supply chain.
R2023-188	Consider the case for setting a 2033 date (rather than 2035) for prohibiting replacement gas boilers in residential and commercial buildings. Set out a timetable for implementing regulations, taking into consideration the benefits of providing early policy certainty. **Primary responsibility**: DESNZ	As the Prime Minister set out in a speech on Net Zero on 20 September 2023, we aim to phase out new and replacement installations of fossil fuel heating systems, for all households, including off the gas grid in England, from 2035, where it is clear a heat pump or alternative low carbon heating technology will work effectively. This will allow sufficient time for the transition, and ensure households will not need to make major

#	Recommendation	Response
		energy efficiency upgrades (such as expensive solid wall insulation) in order to comply with the policy. We are proposing to include an exemption for the estimated 20% of properties where there is currently not a suitable low carbon heating solution. We will work with industry to develop detailed guidance on how households and installers should determine whether their property is suitable for a heat pump or other low carbon heating technology. We would expect this guidance to consider factors such as heat loss, potential to upgrade energy efficiency, if necessary, availability of appropriate space, and any legal constraints. We will explore the potential low carbon heating options for properties that might not be suitable for heat pumps including by issuing a consultation in relation to off gas grid properties next year, in line with commitments the Government has made during Parliamentary debates on the Energy Bill.
R2023-189	Respond to the 2020 consultation 'Improving home energy performance through lenders' by finalising and implementing plans to incentivise lenders to improve the energy efficiency of mortgaged properties. **Primary responsibility**: DESNZ	Government consulted in 2020 on proposals for mortgage lenders to support homeowners to improve the energy performance of their properties. The Government's *Powering up Britain* plan confirmed we will respond to the consultation by the end of 2023. Government has also been supporting lenders to develop green lending products for homeowners via innovation funding. Our Green Home Finance Innovation Fund, which completed in 2022, was an early step in supporting the design and piloting of green mortgages. This has been followed by the Green Home Finance Accelerator in October 2022. This competition has made £20 million available to support the development of novel green lending products which will allow homeowners to meet the

#	Recommendation	Response
		upfront cost of decarbonising their homes. 26 projects have been awarded approximately £4.1 million grant funding to undertake initial research and development work. This will be followed by a piloting in 2024 to generate learnings and case studies.
R2023-191	Extend the policy requiring a licence for burning management to cover all protected peatlands, as a step towards limiting its use on all peat soils. Land managers wishing to use burning management must comply with the relevant standards (such as the Heather and Grass Burning Regulations 2021 in England and the Muirburn Code in Scotland), demonstrating its necessity in achieving stated land-use outcomes as well setting restoration plans. **Primary responsibility**: Defra	The Heather and Grass etc Burning (England) Regulations 2021 currently apply to peat of more than 40 cm depth, that is within a Site of Special Scientific Interest which is also a Special Protection Area or Special Area of Conservation. We are keeping the case for extending the legislation under review. New standards will be published in the Heather and Grass Management Code, to be published in 2025 and we continue to encourage and incentivise more sustainable land management practices through ELM, Countryside Stewardship and the National Adaptation Programme. The Wildlife Management and Muirburn Bill currently in the Scottish Parliament requires that all muirburn on peatlands requires a licence, demonstrating its necessity in achieving stated land-use outcomes, and adherence to the Muirburn Code.
R2023-193	Launch a UK-wide multi-year campaign to improve the public's confidence in and understanding of the coming transition for heat. The goals of this campaign should be to provide assurances and combat misinformation, and raise awareness of the schemes and policies which may help households and businesses. This campaign should encourage households and businesses to plan ahead, providing detail on when policy changes will come and	Government plans to run campaigns to support consumers in decarbonising their homes, including raising awareness of available government support and wider energy saving methods to help reduce bills. Campaigns will be spread over multiple years to ensure households gain longer term benefits from decarbonising. Additionally, EPC reforms will help to improve the quality of advice provided to consumers regarding improving their homes. Later this year, Government will

#	Recommendation	Response
	how they will affect consumers. It should also be designed and implemented alongside wider improvements to information for consumers, such as the Government's One-stop-show advice service, EPC reform and Green Building passports. **Primary responsibility**: DESNZ	provide funding for a series of local demonstrator projects, which will test various approaches for delivering in-person advice with a particular focus on harder-to-treat properties, the digitally excluded and vulnerable groups. Lessons learnt from these projects, will inform decisions on whether Government needs to take further action in this area.
R2023-194	Increase policy and funding support for hybrid heating systems to help consumers access them as bridging options where a direct switch to a heat pump or other form of electrical heat is not currently feasible, with a view to helping households transition to technologies which provide 100% low-carbon heat. **Primary responsibility**: DESNZ	While hybrid heating systems have been supported under some schemes to date, the Department's priority has been to direct funding towards technologies that offer the greatest carbon savings, rather than those that involve the burning of fossil fuels. Hybrid heating systems could play a transitional role in heat decarbonisation in the 2020s and 2030s. The Improving Boiler Standards and Efficiency consultation explored the potential role that hybrids could play, both in the near term and beyond 2028. The Government is analysing responses and will issue a response shortly. We remain committed to working with industry to help consumers make sustainable choices in line with our net zero ambitions, and keep all support for different technologies under review.
R2023-195	In line with the Glasgow Climate Pact, commit to phasing out inefficient production subsidies for fossil fuels that lock-in financial resource towards oil and gas extraction, which could result in a breach of the UK's climate budgets or assets that may need to be stranded to comply. **Primary responsibility**: HMT	The UK remains committed to the Glasgow Climate Pact and international efforts to reform inefficient fossil fuel subsidies, having been a longstanding supporter of such multilateral efforts to promote reduced reliance on fossil fuels. The government believes inefficient fossil fuel subsidies encourage wasteful consumption and undermine efforts to deal with the threat of climate change. Internationally, HMG remain committed to the implementation of the International Fossil Fuel Policy (March 2021) through the removal of all direct or

#	Recommendation	Response
		promotional support overseas for the fossil fuel energy sector. The recent global energy crisis has required time-limited interventions to protect households and businesses, in the longer-term we will put our energy future on a sustainable footing that boosts our energy independence and helps deliver our net zero objectives.

Annex B: Summary of Progress Against Net Zero Strategy Reporting Commitments

As part of the *Net Zero Strategy*, we committed to provide a public update on progress against a range of our climate targets and ambitions. The below table shows the quantitative metrics used to report against those commitments where data exists. We have gone beyond those commitments made in the *Net Zero Strategy* and collated data on other, relevant variables which show progress towards our climate ambition. Where quantitative data does not exist to report against a commitment – as is the case with some emerging technologies – an update on delivery progress can also be found in *Powering Up Britain*, published in March 2023.

We will expand this list to capture more variables of interest in future Progress Reports. This will include collecting data on heat networks and expanding our reporting on the industrial sector.

Table 1: Net Zero Strategy Reporting Commitments and Corresponding Quantitative Metrics

Sector	Ambition set in Net Zero Strategy	Corresponding, Quantitative Metric(s)
Power	By 2035 all our electricity will come from low carbon sources subject to security of supply.	Low carbon power generation as a percentage of total projected generation required in 2035 (GB only)
	Up to 50GW of offshore wind by 2030, including up to 5GW floating wind[10].	Cumulative, installed offshore wind energy capacity (MW)
		Of which floating offshore wind (MW)

[10] The British Energy Security Strategy increased the ambition set in the Net Zero Strategy for offshore wind from 40GW to 50GW, of which up to 5GW would be floating offshore wind.

Sector	Ambition set in Net Zero Strategy	Corresponding, Quantitative Metric(s)
Industry[11]	Ambition to deliver 6 MtCO2 per year of industrial CCUS by 2030, and 9 MtCO2 by 2035.	Industry demand for Industrial CCUS – *Please see Carbon Budget Delivery Plan appendix of on Deployment Assumptions for projected performance against this ambition*
Fuel supply and hydrogen	10GW of low carbon hydrogen production capacity by 2030[12].	Low Carbon Hydrogen Production capacity (GW)[13]
	Achieve a final decision on whether to enable blending up to 20% hydrogen by volume into the Great Britain gas network by 2023, subject to successful completion of safety trials.	*N/A*
	The upstream oil and gas sector to have an absolute reduction in production emissions of 10% by 2025, 25% by 2027, and 50% by 2030 on the pathway to net zero by 2050	Percentage change in upstream oil & gas emissions (with respect to 2018 baseline)
Heat and buildings	Aim to reduce direct emissions from public sector buildings by 75% by 2037 compared to 2017.	Percentage reduction in public sector buildings emissions (with respect to 2017 baseline)
	Achieve a minimum market capacity of 600,000 heat pumps per year by 2028.	Annual heat pump installations[14]

[11] HMG is looking at ways in which it can improve the monitoring of decarbonisation policies across the industrial sector, with a view to include that in subsequent progress reports. For industrial carbon capture (ICC), this could include measuring that amount of ICC capacity for which there is a planned ICC project in place. Other metrics under consideration include electricity, hydrogen or bioenergy use across the sector, material substitution, and MtCO2e abated through resource and energy efficiency measures.

[12] The British Energy Security Strategy increased the ambition set in the Net Zero Strategy from 5GW of low carbon hydrogen production by 2030 to 10GW.

[13] Please see the Deployment Assumptions in the Carbon Budget Delivery Plan for projected performance against this ambition

[14] This document reports heat pump sales volumes (as reported in BSRIA, 2022, "Heat Pumps Market Analysis 2021 – United Kingdom") as a proxy for the number of installations. No reliable data source currently collects data on annual heat pump installations in the UK.

Sector	Ambition set in Net Zero Strategy	Corresponding, Quantitative Metric(s)
	As many homes to reach EPC Band C as possible by 2035, where practical, cost effective, and affordable.	Proportion of homes at EPC C and above (England only)
		Number of homes with minimum EPC C (England only)
	As many fuel poor homes as reasonably practicable to EPC Band C by 2030.	Number of households that have received energy efficiency support (ECO, GHGV, LAD)
Transport	Double cycling from 2013 to 2025	Cycling activity (as percentage of 2013 baseline), England
	Increase walking activity by 2025	Walking activity (as percentage of 2025 target of 365 stages per person per year), England
	Deliver 4,000 new zero emission buses and the infrastructure needed to support them.	Share of buses/coaches first registered per annum that are zero emission
	25% of the government car fleet ultra low emission by December 2022 and 100% of the government car and van fleet zero emission by 2027.	Share of total government car and van fleet that is ultra-low emission[15]
	100% of new cars and vans sold are zero emission by 2035.	Share of cars and vans first registered p.a. that are zero emission
	100% of new HGV sold are zero emission by 2040.	Share of HGV first registered p.a. that are zero emission
	100% of new buses/coaches sold are zero emission by 2040.	Share of buses and coaches first registered p.a. that are zero emission

[15] Defra will update on the share of government's vehicle fleet which is zero-emission as part of future reporting against HMG's Greening Government commitments.

Sector	Ambition set in Net Zero Strategy	Corresponding, Quantitative Metric(s)
	Maximise GHG savings from low carbon fuel use in transport by increasing the Renewable Transport Fuel Obligation main obligation from 9.6% in 2021 to 14.6% in 2032.	*N/A*
	Other related metrics	Number of EV charging points (UK) and number constructed in last year
		Change in road traffic vs 2019 baseline (%), Great Britain
		Number of rail passenger journeys (millions, GB only)
		Number of passenger journeys on local bus services (millions, GB only)
		MtCO2e emissions from aviation
		MtCO2e emissions from shipping
Natural resources, waste, and F-gases	Restore at least 35,000 ha of peatlands in England by 2025 and approximately 280,000 hectares of peat in England by 2050.	Yearly area of peatland under restoration (ha)
	Increase tree canopy and woodland cover to 16.5% of total land area in England by 2050[16]	Yearly area of afforestation in the UK (ha)
	Deliver the UN Sustainable Development Goal 12.3 to halve food waste by 2030.	Biodegradable municipal waste (BMW) sent to landfill (Mt)

[16] In the Net Zero Strategy, we committed to report against a different target; to increase tree planting rates from 13,660 hectares across the UK in 2020 to 30,000 hectares each year by the end of this Parliament. This has now been superseded by our legally binding commitment to increase tree canopy.

Sector	Ambition set in Net Zero Strategy	Corresponding, Quantitative Metric(s)
	Explore policies to work towards the near elimination of biodegradable municipal waste to landfill by 2028.	Biodegradable municipal waste (BMW) sent to landfill (Mt)
	Meet the Kigali Amendment target of reducing HFC consumption by 85% by 2036, as well as the F-gas Regulation's target of a 79% reduction by 2030.	HFC Consumption (as a % of 2015 use)
	Other related metrics	Recycling rates for waste from households (%)
Greenhouse gas removals	At least 5 MtCO2/yr of engineered removals by 2030.	*N/A*
Aggregate		Total UK greenhouse emissions and by sector (MtCO2e)

Table 2: Quantitative Reporting Against Net Zero Strategy Targets and Associated Metrics[17]

Sector	Metric	2017	2018	2019	2020	2021	2022
Power	Low carbon power generation as a proportion of total projected generation required in 2035[18], Great Britain	29-34%	30-35%	32-36%	31-35%	34-38%	33-37%
Power	Cumulative, installed offshore wind energy capacity (MW)	6,988	8,181	9,888	10,383	11,257	13,928
Power	Of which floating wind energy capacity (MW)	30	30	32	32	80	80
Fuel Supply	Change in upstream oil & gas emissions with respect to 2018 baseline	N/A	N/A	1.3%	- 8.0%	-20.7%	-
Heat and Buildings	Annual heat pump installations	22,000	26,000	34,000	38,000	58,000	71,000
Heat and Buildings	Proportion of homes at EPC C and above (England)	30%	34%	40%	46%	47%	-
Heat and Buildings	Number of homes with minimum EPC C (England)	7.2m	8.3m	9.9m	10.9m	11.3m	-

[17] All figures are UK-wide unless stated otherwise.

[18] Figures are calculated using high and low range estimates of 2035 generation; this metric shows progress to achieving the goal of having all electricity come from low carbon sources in 2035 (subject to security of supply), as such, 100% of all generation should be low carbon in 2035. Although more offshore wind capacity was installed in 2021, unusually low wind levels meant renewable generation was lower than that of 2020.

Sector	Metric	2017	2018	2019	2020	2021	2022
Heat and Buildings	Annual number of households that have received energy efficiency support, thousands (ECO, GHGV, LAD[19])	ECO: 168	ECO: 178	ECO: 130	ECO: 154 GHG: 0.7 LAD: 0.2	ECO: 173 GHG: 39 LAD: 11	ECO: 68 GHGV: 0.1 LAD: 29
Heat and Buildings	Percentage change in public sector buildings emissions with respect to 2017 baseline		1%	1%	-7%	-2%	-1%
Natural Resources, Waste and F-Gases	Yearly area of peatland under restoration (thousand hectares)		639	448	4,175	2,720	4,323
Natural Resources, Waste and F-Gases	Yearly area of afforestation in the UK (thousand hectares)	7.06	9.05	13.53	13.66	13.29	13.89
Natural Resources, Waste and F-Gases	Hydrofluorocarbons (HFC) Consumption (as a percentage of 2015 use)	93%	63%	63%	63%	45%	45%
Natural Resources, Waste and F-Gases	Recycling rates for waste from households (%)	45%	45%	46%	44%	45%	-
Natural Resources, Waste and F-Gases	Biodegradable municipal waste (BMW) sent to landfill (thousand tonnes), England	5,684	5,598	5,418	4,916	5,325	-
Transport	Share of cars first registered in the UK p.a. that are zero emission	0.54%	0.66%	1.62%	6.52%	11.35%	16.15%

[19] Energy Company Obligation, Green Homes Grant Voucher, and Local Authority Delivery schemes. In 2022 figures for Local Authority Delivery are reported alongside those from the Home Upgrades Grant scheme.

Sector	Metric	2017	2018	2019	2020	2021	2022
Transport	Share of road using light goods vehicles first registered in the UK p.a. that are zero emission	0.35%	0.42%	0.93%	1.89%	3.59%	6.08 %
Transport	Share of total government car and van fleet that is ultra-low emission[20]			8%	13%	18%	25.5 %[21]
Transport	Share of Heavy Goods Vehicles first registered in the UK p.a. that are zero emission	0.01%	0.03%	0.05%	0.05%	0.36%	1.83 %
Transport	Share of buses and coaches first registered in the UK p.a. that are zero emission	0.50%	1.11%	1.70%	6.11%	12.3%	15.7 %
Transport	Number of EV charging devices, UK	-	-	16,505	20,775	28,375	37,0 55
Transport	Average emissions of cars registered for the first time by year (gCO2e/km)	-	-	152.0	133.6	118.5	110. 8
Transport	Road traffic (vehicle miles travelled , as a proportion of 2019 baseline), Great Britain	98%	99%	100%	79%	88%	96%
Transport	Number of rail passenger journeys (millions, GB only)[22]	1,704	1,753	1,739	388	990	1,44 6-

[20] For years beginning in April and running to end March the following year.
[21] Final figure may be higher for the financial year.
[22] For years beginning in April and running to end March the following year. In 2020, the coronavirus (COVID-19) pandemic led to an unprecedented number of season ticket refund claims. This required the use of an alternative methodology to estimate season and other ticket usage for the financial year Apr 2020 to Mar 2021. As a result, there is more uncertainty around these estimates than in other years. For year April 2022 to end March 2023 annual data are provisional.

Sector	Metric	2017	2018	2019	2020	2021	2022
Transport	Number of passenger journeys on local bus services (millions, GB only)[23]	4,832	4,779	4,523	1,731	3,126	-
Transport	Cycling activity (as percentage increase from a 2013 baseline), England	20%	22%	17%	45%	6%	12%
Transport	Walking activity (as percentage of 2025 target of 365 stages per person per year), England	94%	95%	91%	77%	77%	87%

Table 3: UK Net Territorial Greenhouse Gas Emissions by NZS sector (MtCO2e)

Sector	1990	2017	2018	2019	2020	2021
Power	*204.0*	*72.0*	*65.7*	*57.7*	*49.4*	*54.2*
Industry	*160.4*	*81.4*	*79.6*	*78.4*	*74.4*	*76.4*
Fuel Supply	*59.3*	*24.6*	*24.3*	*24.4*	*22.5*	*20.0*
Buildings	*108.7*	*84.2*	*86.5*	*84.0*	*82.3*	*87.9*
Agriculture & LULUCF	*65.5*	*49.8*	*49.7*	*49.8*	*47.8*	*49.0*
Waste & F-gases	*86.9*	*34.4*	*34.0*	*33.1*	*30.6*	*29.6*
Domestic Transport	*128.6*	*126.7*	*125.0*	*123.1*	*99.3*	*109.5*
IAS	*23.6*	*44.1*	*44.5*	*44.1*	*20.9*	*19.5*
Total territorial emissions (excluding IAS)	***813.4***	***473.2***	***464.8***	***450.4***	***406.3***	***426.5***

[23] For years beginning in April and running to end March the following year.

E03009808

978-1-5286-4525-6