Response to the Climate Change Committee's 2023 Progress report: Reducing emissions in Wales

December 2023

ISBN: 978-1-83504-979-2

Presented to the Senedd pursuant to Section 45(7) of the Environment (Wales) Act 2016

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Introduction

On 6 June the Climate Change Committee (CCC) published its second progress report on reducing emissions in Wales.¹ The CCC acknowledged that Wales had met its 2020 target and its first carbon budget (2016-20), and that "some positive steps have been taken in Wales, with a welcome focus from Ministers on skills, jobs and public engagement for the Net Zero transition." However, the CCC also set out that emissions reduction would need to accelerate to ensure Wales meets its current and future carbon budgets and net zero targets. The Minister for Climate Change published a Written Statement that welcomed the report and reiterated the Welsh Government's commitment to making difficult decisions on the path to net zero.²

The Environment (Wales) Act 2016 requires the Welsh Ministers to lay a response to the points raised by the CCC's progress report before the Senedd no later than six months after receiving the report. This document fulfils that statutory duty.

Responding to 'the points raised' by the CCC's report

Chapter 2 of the CCC's progress report contains their assessment of progress in each emissions sector and sub-sector. Across all sectors, the CCC's report makes 58 recommendations for the Welsh Government and identifies a further 19 issues to be addressed. While each recommendation has a deadline, the report does not identify deadlines for the issues to be addressed.

The Minister's Written Statement welcomes the fact that the CCC's report highlights once again the crucial role for the UK Government in tackling Welsh emissions in many carbonintensive sectors. The report also helpfully contains the CCC's assessment of risks to progress in various policy areas in Wales due to UK Government action, scored as low, medium or high.

For the purposes of this response, we have defined 'the points raised' by the CCC's report as being the recommendations, the issues to be addressed and those areas where the risk to progress in Wales due to UK Government action is high. We sought and received the UK Government's response to the CCC's assessment of high-risk areas.

2021 emissions data

When the CCC's progress report was published in June, the latest available emissions data was for 2020. Since then, data has been published which shows estimated Welsh emissions have decreased 35% in 2021 compared to baseline year emissions.³ This compares to the statutory requirement for an average emission reduction of 37% over the second carbon budget (2021-25), and the need we identified in Net Zero Wales to outperform that target.⁴

¹ Progress Report: Reducing emissions in Wales - Climate Change Committee (5 June 2023)

² <u>Written Statement: Publication of the Climate Change Committee Progress report: Reducing emissions in</u> <u>Wales 2023</u> (9 June 2023)

³ <u>Written Statement: Publication of Emissions Data for 2021</u> (22 June 2023)

⁴ Net Zero Wales: Carbon Budget 2 (2021-2025), p.10

Our next plan

The Welsh Government is due to publish its plan for Carbon Budget 3 (2026-30) in 2026, aligned with the next Senedd electoral cycle.

The role of the UK Government

We continue to press the UK Government to take actions that will enable decarbonisation in non-devolved areas, whilst promoting social justice. These include developing further mechanisms to mobilise housing renovation and decarbonisation at scale, and creating the funding packages required to enable and incentivise industry to decarbonise.

In response to the Prime Minister's announcements on 20 September,⁵ the Welsh and Scottish Governments jointly wrote to the UK Government requesting a high-level fournation summit, chaired by the CCC, to address the impact of the announcements on all nations' legally-binding targets.

⁵ PM speech on Net Zero: 20 September 2023

Welsh Government response to the points raised by the CCC

Agriculture

CCC ref.	Recommendation / Issue	Timing	WG response
R2022-043	Provide detail on how post-CAP agricultural subsidies and	2022	ACCEPT
	schemes in Wales will target incentives and delivery for	OVERDUE	The Welsh Government's support for the agriculture
	climate mitigation alongside wider environmental goals		sector is aligned to the delivery of Net Zero Wales
	such as climate change adaptation and biodiversity.		and the sustainable management of natural
	CCC PRIORITY		resources in the Environment (Wales) Act.
			The current capital grant schemes provide support
			for positive action which aligns to the Sustainable
			Land Management Objectives which have been
			enshrined in the Agriculture (Wales) Bill.
			The Agriculture (Wales) Act became law in August
			2023 and established four Sustainable Land
			Management objectives to underpin future support
			(financial and non-financial). The objectives cover
			the sustainable production of food, climate change
			adaptation and mitigation, maintaining the resilience
			of ecosystems and conserving cultural resources.
			There is a duty on Welsh Ministers to consider how
			future policies best contribute to these objectives.
			The Sustainable Farming Scheme is the first major
			new scheme to be built on these objectives.
R2023-033	Move beyond the voluntary nature of current CAP	2024	PARTIALLY ACCEPT
	replacement schemes by setting a strong regulatory		We continue to work on the basis that participation
	baseline that strengthens rules such as those under the		in the Sustainable Farming Scheme will be voluntary.
			However, we are undertaking reforms to the

	Basic Payment Scheme and retains them in Welsh legislation.		regulatory baseline, including the new Water Resources (Control of Agricultural Pollution) regulations. We acknowledge the need for further changes over time to ensure the regulatory baseline is appropriate.
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 beginning in 2025, to ensure delivery does not lose momentum. CCC PRIORITY	Q3 2023	ACCEPT In July, the Minister for Rural Affairs and North Wales announced an interim agri-environment scheme. In September, the Minister announced the opening of the application round for the Habitat Wales Scheme (HWS) from 29 September to 10 November. ⁶ The HWS will support sustainable management of habitats, where these have been identified using published habitat data on DataMapWales. With applications being scored and ranked to enable an open, objective and transparent selection process, certain objective layers, e.g. buffer zones around designated sites, will be used to enhance scores to ensure the support is delivered where it will bring about the greatest benefits first.
R2023-036	Maintain and enhance incentives to support agroforestry and hedgerows in the Welsh farmed landscape over the transition to the new post-CAP framework. 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.	H1 2024	ACCEPT In 2022/23 we created 1,190 hectares of woodland, almost double the amount in the previous year. ⁷ Proposals to increase tree cover to 10% of each farm are a major focus for the development of the Sustainable Farming Scheme. We continue to

⁶ Written Statement: Habitat Wales Scheme 2024/25 (25 September 2023)
 ⁷ Forestry Statistics 2023 (Forestry Research, p.41)

			explore agroforestry opportunities and promote the benefits of trees for livestock health and soil protection.
R2023-123	Where appropriate, the Sustainable Farming Scheme should consider rewarding the environmental benefits that the planting of perennial energy crops can deliver on arable land in the same way that England's Sustainable Farming Incentive has confirmed it will.	2024	PARTIALLY ACCEPTWe do not propose to include biomass crops in the SFS when it commences in 2025. We will explore whether biomass is an Optional Action which should be included during the transition period.There are no immediate plans to directly support biomass production in the Growing for the Environment (GftE) scheme. The GftE scheme supports the undersowing of an established maize crop, but not the maize crop itself. We do not specify what the maize crop should be used for and it could therefore be used as biomass. Only the costs incurred and income foregone to establish the undersown crop of grasses and legumes is supported; the undersowing minimises soil erosion
R2023-159	Develop and maintain a sustained dialogue with rural	2024	and leaching of nutrients after harvesting. ACCEPT
ντητ3-123	communities to understand and embed their views into a rural just transition.	2024	ACCEPT Through Farming Connect, our Knowledge Transfer programme, a coordinated and modular offering is available to support the progression of businesses through current and upcoming challenges and opportunities. Key messages and strategic aims and goals of the Welsh Government together with information on leading industry research and innovation is disseminating knowledge to the Welsh farming sector to provide an effective knowledge

			transfer approach, motivating change in behaviour and attitudes to maximise the uptake of new ideas. Following a joint Written Statement by Welsh Ministers in 2022, we are working co-productively with a range of stakeholders on developing a new Communities Policy to help communities to be more thriving, empowered and connected. ⁸ The policy development process is looking at how Welsh Government can support action to harness the assets and creative energy in local communities and help develop solutions to the issues that are most important to them. We have highlighted 'farmers and rural community
			groups' as a key audience for organisations to target when holding conversations.
ISSUE	Address constraints of land managers under farm business tenancies to support their engagement with the new farming subsidy package.	N/A	AGREE The Agriculture (Wales) Act 2023 inserted new provisions in the Agricultural Tenancies Act 1995, as well as the Agricultural Holdings Act 1986, to ensure tenants of both Acts are not unfairly restricted from accessing future government support for farmers. The new provisions will allow tenants to refer to arbitration certain disputes with their landlord. These include requests for consent or to vary the terms of the tenancy, where that request is for the purpose of accessing financial support under the 2023 Act. A series of dedicated stakeholder working

⁸ Written Statement: Communities Policy (4 July 2022)

	groups were convened to specifically identify any unique challenges and associated mitigations for
	tenant farmers within the proposed Sustainable
	Farming Scheme.

Land use

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-035	Ensure that funding and incentives are set at the correct	H1 2024	PARTIALLY ACCEPT
	level to meet the Welsh Government peatland restoration		A costed pathway to meet peatland restoration
	target of 1800 hectares per year by 2030. By 2035, 58% of		targets is in place and will be subject to normal
	peatland should be under restoration management, and		budget processes. A review of baseline emissions
	79% by 2050. All upland peat should be under restoration		and peatland condition types is underway; our
	management by 2045.		peatland decarbonisation pathway may vary from
			the percentages in the CCC's recommendation.
R2023-050	Publish the Timber Industrial Strategy. This document	2023	PARTIALLY ACCEPT
	should set out an ambitious target for increased use of		We have been working closely with a range of
	Welsh-grown timber in construction and introduce policies		partners on increasing the use of Welsh-grown
	that encourage the use of timber in the construction of		timber in construction. The final form any strategy
	buildings in Wales.		will take will be subject to further consideration with
			those partners.
R2023-054	Implement a strategy to address non-financial barriers to	H1 2024	ACCEPT
	achieve annual tree planting rates of at least 4,500		We are reviewing grant application and plan
	hectares/year in Wales by 2030, rising to 7,500/year by		verification processes to improve the speed and
	2035.		effectiveness of our systems. We will continue to
	CCC PRIORITY		explore ways to engage with landowners to
			encourage participation in woodland creation.
R2023-122	Proposals to attract private sector investment into	Q3 2023	ACCEPT
	woodland creation need to be firmed up as soon as is		
	practicable.		

ISSUE	Increase peatland restoration ambition to align with or exceed the trajectory set in the CCC Sixth Carbon Budget	N/A	The Woodland Finance Working Group has published its findings.9 Progress has been made on implementing most of the recommendations.AGREE Table 2.1 of the CCC's progress report acknowledges
	advice.		our annual peatland restoration target (as established under the Biodiversity Deep Dive) exceeds the trajectory set in the CCC's advice.
ISSUE	Continue to consider and implement the recommendations of the Trees and Timber Deep Dive Panel, where [WG] has not already done so. This includes publishing user-friendly guidance for farmers on tree planting, and ensuring any future advisory service has a prominent role for woodland advice to support sustainable, productive farm businesses.	N/A	AGREEThe Deep Dive identified changes to remove the barriers to woodland creation.10 These recommendations are now being implemented and should drive an increase in woodland creation in future years. It will take time for the changes identified in the Deep Dive to have an impact.Planning for almost all of the woodlands planted last year will have begun before the Deep Dive was held.Progress has been made on specific actions such as recruitment of the woodland liaison officer team, Natural Resources Wales website review and a joint partnerships communications approach.
ISSUE	A target for timber used in construction in buildings in Wales could send a clear signal to industry on the expected increases in volume they may need to service.	N/A	PARTIALLY AGREE Work is ongoing through the Welsh Government- funded Home Grown Homes 2 project, looking along the supply chain. This includes work to understand the volumes of timber required for construction, with a focus on developing standard housing designs

 ⁹ Woodland Finance Working Group: recommendations for woodland creation
 ¹⁰ Trees and Timber Task Force: recommendations

			for social housing. This information will inform future expectations of demand.
ISSUE	Build on learnings from programmes such as the Home Grown Homes to consider how policies and initiatives can be used to both encourage more Welsh-grown timber to be used in construction and to encourage the use of timber in construction of buildings in Wales, particularly social housing.	N/A	AGREE Woodknowledge Wales is delivering work programmes under the project, subjects covered include: Greenhouse Gas Removal; Enabling Supply; Market Stimulation; Education and Training; Afforestation and Decarbonisation. The project will inform the Timber Industrial Strategy and support policies across decarbonisation, resource efficiency and circular economy, foundational economy, housing, manufacturing and forestry.

Waste

CCC ref.	Recommendation / Issue	Timing	WG response
R2022-327	Set ambitious recycling targets for 2030 and beyond,	H1 2024	ACCEPT
	improving on the 70% target for 2025.		We are working in partnership with Local Authorities
	CCC PRIORITY		to develop the pathway for recycling targets beyond
			the 70% statutory minimum target that comes into
			place in 2024-25. The first step was to commission a
			new study of the composition of residual municipal
			waste. The results were published in July 2023. ¹¹
R2022-328	Set out and implement additional policies necessary to	2023	ACCEPT
	achieve waste reduction and recycling targets, as part of		We know there is more to do to meet our target of
	delivering the Beyond Recycling Strategy more broadly.		70% recycling by 2025, with the workplace recycling
	Specifically, greater focus on removing plastics and textiles		regulations now laid before the Senedd, which

¹¹ National local authority waste composition in Wales (WRAP, 2023)

	from residual waste as well as greater focus on waste prevention and circular economy are needed.		would extend separate collection of recycling to the workplace.
			We are investing in resources and campaigns to help the public adopt ways to reduce their food waste, whilst in parallel providing funding to FareShare Cymru to expand their coverage in redistributing food that would otherwise be wasted.
			We are taking forward work to improve resource efficiency and keep materials in use for as long as possible as part of the transition needed to a circular economy through development of our re-use, repair and manufacture programme in collaboration with partners; working with WRAP on development of public sector sustainable procurement guidance and providing support directly to public sector
R2023-004	Set out policies or support to capture methane emissions from landfill sites, in addition to improving the monitoring of emissions. CCC PRIORITY	H1 2024	organisations to procure more sustainably. ACCEPT We have funded Natural Resources Wales (NRW) to deliver the Landfill Emissions Reduction Programme (LERP). NRW is carrying out a series of detailed landfill gas audits with the aim of increasing rates of landfill gas capture and oxidation / utilisation at operational and recently closed landfill sites.
			The programme includes work to improve the level of understanding of landfill gas flaring at all applicable sites, with the aim of ensuring outputs of

			the national Landfill Gas model present a more accurate picture.
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. CCC PRIORITY	H1 2024	ACCEPT Work is already under way in this area with funding deployed to decarbonise the waste and recycling fleets. This is becoming an important consideration as we work with LAs to develop strategic change programmes. Like many areas, there will be many cross-cutting elements to this which are not unique to the waste sector, including energy provision, procurement, and the flow of materials across the border with England.
ISSUE	Continue to engage closely with LAs and businesses around the incoming EPR and DRS reforms, to address concerns about the schemes.	N/A	AGREE The UK-wide implementation of the Extended Producer Responsibility for packaging reforms have been deferred by 12 months. This will allow additional time to get the operational arrangements of the scheme right through further engagement with the packaging sector and local authorities. For example, as part of the four-nation programme, we have launched a consultation on the Statutory Instrument that underpins EPR, to test its clarity and operational feasibility with all parts of the collection and packaging supply chain. This has included further webinars on the SI itself, alongside the regular Business Readiness Forums and Local Authority Forums.
			New regulations were introduced across the UK during the first half of 2023 which require producers

		of packaging to report data on the volumes and types of packaging they place on the market, alongside a cost data collection exercise undertaken over the summer of 2023 with local authorities, these two data sets will be used to calculate the fees producers need to pay and the payments local authorities will receive in the first year of the scheme going live which is now scheduled for 2025/26. Work on the deposit return scheme progresses. However, delays have occurred due to the need to
		work through the implications of the UK Government's decision on the Scottish
		Government's request for an exemption of their DRS from the UK Internal Market Act. The conditions set
		for the UK Government to grant this exemption for
		Scotland resulted in the planned go-live date of the Scottish scheme to be halted.
ISSUE	Very little detail has been provided by the Welsh	PARTIALLY AGREE
	Government on how it intends to enable and encourage	The Strategic Priorities and Objectives Statement
	water companies and industrial users to reduce emissions	issued to Ofwat in July 2022 outlined that we expect
	from wastewater. This is a policy gap.	water companies to develop clear and robust plans
		for how they are proposing to address the impacts of
		climate change and achieve net zero commitments.
		We recognise the role water companies need to play
		in the reduction of emissions from wastewater and
		will continue to engage with the sector, and with
		regulators, to make positive progress.

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CCC ref.	Recommendation / Issue	Timing	WG response
R2023-008	Set out an aviation decarbonisation pathway to 2050 in	H1 2024	ACCEPT
	line with Wales's Carbon Budgets and Net Zero target.		Aviation policy is a reserved matter. The nature of air
			travel in the UK means that many travellers from
			Wales use, or have the option to use, airports in
			England, which has implications for the potential
			effectiveness of Welsh policies.
			We regularly engage with UK Government
			Department for Transport on all aspects of aviation
			policy. We are also actively engage with UK and
			other Devolved Governments in relation to the
			Carbon Offsetting and Reduction Scheme for
			International Aviation (CORSIA) and the UK
			Emissions Trading Scheme (UK ETS) Authority.
R2023-009	Work with the UK Government to ensure that Cardiff	Ongoing	ACCEPT
	Airport is prepared for SAF uptake from 2025 onwards.		We are working with Cardiff Airport on the future
	This includes an enabling regulatory environment,		uptake of sustainable aviation fuel (SAF) and we are
	infrastructure and locally upskilled workers.		pleased that Cardiff Airport has committed to using
			it and offering to airlines as soon as practicably
			possible. SAF availability is currently limited as
			production is less than 1% of the global jet fuel
			demand. ¹²
			We welcomed the recent news that LanzaTech
			intends to build pioneering carbon recycling facilities
			in Port Talbot to convert industrial emissions into

¹² Update on Sustainable Aviation Fuels (SAF), International Air Transport Association

			SAF. ¹³ The project is supported through £25 million from the UK Government's Advanced Fuels Fund. We see SAF as an intermediate carbon reduction solution, as the industry looks to the development of new zero-emission aircraft, such as hydrogen-fuelled and electric-powered aircraft. There is a UK-wide industry concern about the cost and affordability of SAF. There is currently no incentive for airlines to switch to SAF as it is currently more expensive than fossil fuels. Therefore, there is not sufficient demand for regional airports to invest in the provision SAF
R2023-011	Support the UK Government in pushing for inclusion of a Net Zero 2050 target in the International Maritime Organisation's 2023 update of its Greenhouse Gas Strategy.	H1 2023	especially given its limited availability. ACCEPT We will support the UK Government in pushing for the IMO to include a net zero 2050 target in its Greenhouse Gas Strategy.
R2023-013	Develop a plan for deploying shore power and electric recharging infrastructure at all of Wales's major ports. This should include identifying roles and responsibilities for delivery and providing support and incentives to drive investment. This could be included in the Welsh National Ports and Maritime Plan.	Q3 2023	ACCEPT The Welsh Government continues to support the UK Government's UK Shore project and encourages our ports to bid for funding through this programme, such as the Clean Maritime Demonstration Competitions. This will be factored into the exercise of identifying roles and responsibilities for delivery and providing support and incentives to drive investment into shore power and electric recharging infrastructure.

¹³ LanzaTech plans announced for Wales' first Sustainable Aviation Fuel production in Port Talbot (17 April 2023)

			Furthermore, we will consider the impact of the Infrastructure (Wales) Bill being introduced into the Senedd on shore power and electric charging infrastructure. As this Bill will establish a new process for consenting major infrastructure projects, including significant energy, waste, water and transport, projects. This Bill will streamline and unify the decision-making process, helping to support port investment and development.
R2023-014	Set out in the Wales National Ports and Maritime Plan a shipping decarbonisation pathway in line with Wales's Carbon Budgets and Net Zero target and how Ports will enable uptake of low carbon shipping fuels and electrification.	Q3 2023	PARTIALLY ACCEPT We will consider a shipping decarbonisation pathway in line with Wales's carbon budgets and net zero target and how ports will enable uptake of low carbon shipping fuels and electrification.
R2023-015	The Welsh Government should work with the Civil Aviation Authority to begin collecting passenger origin data to track Welsh passengers travelling to English airports to fly.	Q3 2023	ACCEPT The CAA already undertakes annual research into passenger flight activity across the UK, which includes information on the origin/destination of passengers at a number of UK airports. The most recent Passenger Survey in 2022 did not cover Cardiff or Bristol airports, leaving a significant gap in understanding of Welsh passenger patterns since the previous survey in 2019. We will explore with the CAA the possibility of capturing the relevant data more regularly. ¹⁴

¹⁴ Survey reports | Civil Aviation Authority

R2023-017	Work with other devolved administrations and the UK Department for Transport to ensure that published vehicle licensing statistics present an accurate picture of EV uptake by nation.	H1 2024	ACCEPT The issues with the reliability of data relating to EV uptake in Wales have been raised with the UK Department for Transport, particularly in the context of discussions on the ZEV mandate. Commitments have been made to seek to improve the spatial data accuracy and we will work with the DfT and other governments to ensure that the issue is resolved.
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. CCC PRIORITY	Ongoing	ACCEPT We will monitor the uptake of EVs and will consider opportunities to maximise savings and deliver co- benefits.
R2023-019	Increase chargepoint deployment to meet the ambition to provide one public chargepoint for every 7-11 EVs by 2025.	2025	PARTIALLY ACCEPT The number of public charging devices per 100,000 residents installed in Wales has increased from 27 in April 2021 to 61 as at July 2023. UK figure is 66 but many English regions outside London are lower than Wales. That represents growth of 125% since the publication of the EV Charging Strategy for Wales. Wales has seen 58% growth in public charging provision and 78% growth in public rapid charging devices in the last year (UK growth has been 38% and 42% respectively).
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	H1 2024	ACCEPT

	measures that limit car usage will interact with those that		We are currently developing the detail around the
	enable more sustainable modes.		the 10% per person car km reduction by 2030. We
	CCC PRIORITY		anticipate completing this work in Spring 2024.
R2023-021	Agree and publish funding settlements for active travel	2023	PARTIALLY ACCEPT
	beyond 2024/25. Ideally, these should provide certainty on		The Active Travel Fund has grown five-fold since its
	funding availability for a number of years.		introduction. The Welsh Government has a limited
			ability to provide long term funding certainty
			because of its own budgetary constraints. While we
			are unable to provide certainty of funding availability
			to local authorities, we have established the core
			allocation mechanism to provide a baseline level of
			funding each year to develop a pipeline of projects
			and undertake small improvements.
R2023-022	Develop a more joined-up, straightforward, and affordable	2023	PARTIALLY ACCEPT
	system of public transport fares across Wales.		We set out proposals for new legislation in our white
			paper: One Network, One Timetable, One Ticket ¹⁵
			which would reform the planning and delivery of bus
			services in Wales and bring them back under public
			control. This will allow us to work with Transport for
			Wales and local authorities to set up one ticketing
			system for local bus services in Wales, designed to
			be simple, fairer and more affordable across the
			whole network. Transport for Wales will then play a
			key role in integrating this ticketing system as far as
			we can with rail services.
			Given the extent to which public transport services
			since the pandemic are even more reliant on public

¹⁵ One network, one timetable, one ticket: planning buses as a public service for Wales

	Dublish the National Engistic and Legistics Diag. including	2024	funding, and the constraints on the Welsh Government budget, the affordability of public transport will be impacted by the budgetary decisions of the UK Government.
R2023-023	Publish the National Freight and Logistics Plan, including policies on demandside measures such as urban consolidation and modal shift.	2024	PARTIALLY ACCEPT Our policies in relation to freight and logistics will consider future policies around urban consolidation and modal shift.
ISSUE	The Welsh Government should be involved in the UK Government's next steps on heavy-duty vehicles – including consulting on sales regulations and considering what enabling infrastructure and support might be required.	N/A	AGREE It is vitally important that the Welsh Government is involved in any UK Government plans to drive carbon savings from heavy-duty vehicles. Welsh Government officials are currently engaged with the UK Government via various groups.
ISSUE	A comprehensive plan for decarbonising Britain's railways is needed, including establishment of a rolling programme of track electrification. The Welsh Government should be involved in the development of this.	N/A	AGREE We have invested over £1bn in electrifying the core valley lines and are currently introducing a brand new fleet which has significantly cleaner operations than previous rolling stock. However, the vast majority of the rail network is reserved, and therefore the responsibility of the UK Government in terms of both infrastructure and the services run by other operators. Through the Wales Rail Board we are working with the UK Government to agree a shared set of priorities for future investment, which will include considering the potential benefits for climate change targets. This would be the appropriate forum for the Welsh Government to be consulted on a UK-wide rolling programme of electrification. Additionally Transport for Wales is

	developing its own decarbonisation plans which will
	include options for future rolling stock.

Buildings

CCC ref.	Recommendation / Issue	Timing	WG response
R2022-111	Drawing on the recommendations of the Auditor General	2023	ACCEPT
	for Wales, publish plans for future iterations of the Warm		We published a policy statement on the new Warm
	Homes Programme to tackle fuel poverty and decarbonise		Homes Programme in June. It sets out how the
	homes, addressing the scheme's reliance on fossil fuel		scheme will shift away from fossil fuel heating. ¹⁶
	heating and slow roll-out.		
R2023-039	Develop a detailed plan for decarbonising buildings and	2024	PARTIALLY ACCEPT
	reaching Net Zero targets, incorporating data from Local		We know that innovative funding models will be
	Area Energy Plans. The plan should include estimates of		needed to pay for decarbonisation, the costs of
	investment requirements and yearly targets for		which cannot fall solely on the Welsh Government.
	deployment of low carbon heating and energy efficiency		We are working with our Decarbonisation
	measures. It should identify policy areas which are under		Implementation Group on developing a route map
	Welsh Government control and those which require		for residential decarbonisation which would
	coordination with the UK Government.		compliment the action plans from the Heat Strategy.
	CCC PRIORITY		Recent policy changes at UK Government level
			highlight the impact of those policy areas under the
			control of the UK Government.
R2023-040	Fully assess the level of investment required to	H1 2024	PARTIALLY ACCEPT
	decarbonise social housing and make long-term plans for		Our plans for the Welsh Housing Quality Standard
	delivering the funding required. Evaluate the cost		2023 include a 3-year period during which social
	effectiveness of retrofitting social housing to reach an EPC		landlords will be undertaking comprehensive Target
	'A' rating, and review the proposed target.		Energy Pathways for their stock and completing a
	CCC PRIORITY		Whole Stock Assessment, including a timeline and

¹⁶ New Warm Homes Programme: policy statement

			outline costs. The requirements of the standard will be reflected on once that phase is completed. We are working with social landlords to consider the funding requirements to decarbonise the social housing stock and remain committed to working
			with landlords to explore future avenues of funding.
R2023-042	Conduct an urgent review of planning policies (including the details of permitted development rights) which may restrict installations of low-carbon heating and energy efficiency measures, and amend regulations where appropriate.	H1 2024	REJECTWe keep planning policies under constant review and seek to ensure that they deliver wider government commitments. However, we do not intend to review planning policies next year specifically for their effect on installations of low- carbon heating and energy efficiency measures.
R2023-043	Update building regulations to ensure that all new buildings are resilient to climate change impacts, and incorporate ultra-high energy efficiency standards and low- carbon heating. Ensure that these new standards will be in place by 2025. Ensure that the standards mean that no new buildings are connected to the gas grid from 2025. 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.	2024	PARTIALLY ACCEPT In 2022 we made a significant and necessary step change in energy and carbon performance in new buildings. The reduction is a stepping stone towards the next changes to energy efficiency in Building Regulations in 2025. Our vision for the 2025 minimum standard is to deliver highly efficient buildings which use low carbon heat sources for heating and hot water. However, we recognise that this timeline may be challenging for certain types of non-domestic buildings with different heat and hot water demand characteristics, which will need to be carefully considered as part of the 2025 review. The 2022 changes also introduced new requirements
			to mitigate the risk of overheating in new residential buildings. As part of the 2022 changes, transitional

			arrangements were strengthened to require that any individual buildings which have not commenced on site within a year of the implementation date will need to meet the new standards. These will be
			reviewed again for the 2025 changes to ensure the policy objective is being met.
R2023-044	Design and implement a public engagement strategy which will raise awareness of the changes required to decarbonise buildings and provide advice to consumers on retrofitting homes.	2024	PARTIALLY ACCEPT We have published a Public Engagement Strategy for climate change that includes 'Home Energy' as one of the four Green Choice themes. We do not intend to develop a strategy for each Green Choice theme but our Heat Strategy for Wales, published for consultation in August 2023, commits us to engaging households to build a better understanding of low- carbon heat and communicate the support available for the heat transition. Our new Climate Action Wales website provides information about decarbonising homes.
R2023-045	Quantify the skills and workforce requirements for decarbonising buildings, and develop policies to support meeting these requirements.	H1 2024	ACCEPT In October we launched a net zero sector skills consultation ¹⁷ that aims to build on the knowledge and evidence that informed the net zero skills action plan. ¹⁸ The consultation sets out our current understanding of the skills position of each emission sector and aims to identify what skills are needed in the short, medium and longer term.

 ¹⁷ <u>Net zero sector skills consultation</u>
 ¹⁸ <u>Net zero skills action plan</u>

R2023-112	Fully assess the level of investment required to decarbonise fuel poor homes and make long-term plans for delivering the funding required. CCC PRIORITY	H1 2024	Strong stakeholder engagement is ongoing to help support and gain intelligence on emerging sector needs. A four-nation net zero working group has been set up at official level to promote a joined-up approach and share good practice and learning from across the nations. PARTIALLY ACCEPT We recognise the need to promote a just transition by supporting fuel poor households with the decarbonisation of their homes, primarily through the adoption of energy efficiency measures and low carbon beating systems. Assessing the practical
			carbon heating systems. Assessing the practical actions required and their associated costs is extremely important if we are to build on the success of our Warm Homes Programme. There are, however, a number of barriers, including the availability of relevant and robust data and a challenging budget settlement. Our first step is to develop a methodology to assessing the need, which we aim to start this financial year, and fill any data gaps.
ISSUE	Could develop more ambitious plans for enabling delivery of low-carbon heating and energy efficiency in those areas where it has powers, such as skills and investment.	N/A	PARTIALLY AGREE We are developing a route-map for residential decarbonisation that will align with our Heat Strategy and the action plan for the residential elements of the heat strategy. Our plans in relation to skills are outlined in our response to R2023-045.
ISSUE	Energy standards could be improved by using absolute targets for energy use rather than comparison against notional buildings.		DISAGREE We have considered using a number of energy standards, each with their pros and cons. However,

			the whole construction sector makes use of the well- established Standard Assessment Procedure (SAP) as an Energy Standard for buildings. Adopting a different approach to the rest of the UK is likely to create uncertainty and an additional burden for the Welsh construction sector, which at this stage could be detrimental to progress. We continue to engage with colleagues in the UK Government to improve version 11 of the SAP for launch in 2025, to better reflect Wales's net zero commitments and the actual energy usage of buildings.
ISSUE	Improvements to building standards enforcement are needed, including expanding the use of performance testing, to ensure that the actual performance of new buildings aligns with expectations and to hold contractors to account for quality and performance.	N/A	PARTIALLY AGREEThe 2022 Part L changes introduced newrequirements for new dwellings (includingphotographic evidence, a new compliance reportand a home energy guide), aimed at reducing theperformance gap. Air permeability testing is alsonow a requirement on all new dwellings. Furtherconsideration of the performance gap will beconsidered in the Part L 2025 review to identify iffurther building regulation changes are needed.The Building Safety Act introduces enhanced powersfor building control authorities to address non-compliance with building regulations. As part of thenew Gateway regime, compliance or stop notices arebeing introduced (2024 is our current estimatedtimeline for introduction) where there is or is likelyto be a contravention of building regulations. Beforethis Act, there was no power available to stop non-

	compliant building work from being continued or completed. The issue of such a notice will also avoid
	any nugatory further work being undertaken on a
	non-compliant building by ensuring each stage is
	compliant before the next is commenced.

Power

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-024	Assess the potential for large-scale hydrogen production and supporting infrastructure in Wales beyond 2023/24 and coordinate with the UK Government on how Wales can best contribute to UK-wide plans.	Q1 2024	ACCEPT The Future Energy Grids for Wales Report assessed the future energy scenarios for Wales to achieve net zero by 2050. ¹⁹ This analysis included the role hydrogen could play across electricity generation, industrial decarbonisation and heat. We continue to look to work with the UK Government on the findings of the report and the role Wales can play in
R2023-025	Produce a Bioenergy Action Plan clarifying the position on bioenergy in Wales, setting out its best use, key delivery mechanisms, available funding, licensing requirements and future timelines.	2024	supporting UK net zero targets and plans.PARTIALLY ACCEPTWe agree that it would be helpful to clarify the issues and opportunities surrounding bioenergy.Resource availability means that this work is unlikely to start in 2024.
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	2023	ACCEPT The national programme of energy planning across Wales, due to complete by March 2024, provides a strong evidence base to establish network needs.

¹⁹ Future energy grids for Wales: reports

ISSUE	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 electricity generation capacity in line with UK Government targets and Welsh Government ambition.CCC PRIORITYThe Welsh Government opted out of participating in the Green Heat Network fund. This potentially leaves a lack of	N/A	We recognise the need to re-wire the country to meet net zero goals and commit to establishing a set of principles to determine whether network proposals should be supported. We have also offered to pilot the proposed Regional Network Planner in Wales, considering how spatial and network planning can be aligned, and how environmental, social and economic considerations can be balanced to accommodate the new infrastructure necessary to provide people with continued access to heat, transport and economic activity alongside rich and improving natural capital. AGREE In August we published our Heat Strategy for
	support for investment in larger heat network schemes. The Welsh Government should ensure that plans are put in place to support delivery of heat networks where a need for these is identified in Local Area Energy Plans.		consultation. ²⁰ . We will continue to engage UK Government on heat network support and regulations.
ISSUE	Work with the UK Government in reserved areas to deliver strong policy consistent with decarbonising electricity supply by 2035 (e.g. on standards for new-build power plants) and take Welsh-specific programmes and devolved policy forward to support decarbonisation.	N/A	AGREE We have been working with the UK Government on decarbonisation readiness of the power sector in Wales.

²⁰ Heat strategy for Wales

Industry

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-026	Identify local and national requirements for, and opportunities from, industrial decarbonisation in the National Energy Plan for Wales and Local Area Energy Plans.	2024	ACCEPT Local area energy plans will identify the changes required to the local energy system to decarbonise heat, realise opportunities for local renewable energy production and support strategic network planning.
			Our engagement with industry, including through Net Zero Industry Wales, will enable an understanding of the priorities required of industry from a low carbon energy system to enable industry to reduce emissions from industrial processes and improve competitiveness.
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. CCC PRIORITY	Ongoing	ACCEPT We recognise around 60% of the changes required in Wales to achieve a pathway to net zero will be influenced by powers primarily reserved to the UK Government. The UK cannot reach its net zero targets without Welsh industry decarbonising, which places a responsibility on the UK Government to deliver appropriately for Wales. We continue to work with the UK Government to maximise opportunities arising for Welsh industry and business from UK level initiatives to support energy efficiency and deep decarbonisation projects. This includes the development of business models for carbon capture and storage that include a solution for non-pipeline transportation (NPT) of CO ₂ before 2030, if we are to

			meet the requirements of CB3. The establishment of Net Zero Industry Wales is supporting the coordination of industrial decarbonisation projects across Wales and prioritising the UK-level support required to enable a just transition to net zero for industry.
(From 2020 advice report)	Ensure that decarbonisation plans are developed for gas processing and refining facilities consistent with Net Zero, including deep decarbonisation during the 2030s.	N/A	ACCEPT We continue to engage with industrial stakeholders in the gas processing and refining sectors as projects and proposals to decarbonise industrial processes are taken forward. We also continue to engage with the Milford Haven Waterway Future Energy Cluster, led by the Milford Haven Port Authority, and include RWE, Valero, Dragon LNG and South Hook LNG on proposals to repurpose existing assets in Pembrokeshire that could enable decarbonisation of industrial and energy operations more widely across South Wales.
ISSUE	Work with industry to identify potential engineered removals projects within the South Wales Industrial Cluster.	N/A	 AGREE Our feasibility study (R2023-049) will shape our policy position on the role of engineered removals in Wales's targets and carbon budgets. Engineered removals are an implicit element of the five key decarbonisation cogs identified in the South Wales Industrial Cluster (SWIC) Cluster Plan Report. We recognise carbon transport and storage infrastructure, and a solution for non-pipeline transport of CO2, will be essential for the production of negative emissions using engineered removals.

	Our feasibility study (R2023-049) will shape our
	policy position on the role of engineered removals in
	Wales's targets and carbon budgets. We will
	continue to engage with industry, including through
	Net Zero Industry Wales, to determine the potential
	role of engineered removal technologies for the
	hardest to abate emissions from certain industrial
	processes.

Public sector

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-028	Require all public bodies to identify the actions required to	Q1 2024	PARTIALLY ACCEPT
	meet the 2030 public sector decarbonisation goal and		This work must be carried out with partners and
	embed these actions within their corporate plans and		within the resource constraints we face. In 2021, we
	reporting.		published the Net Zero Carbon Status by 2030:
			Public Sector Route Map which provides an overview
			of the actions and milestones needed for the Welsh
			public sector to reach this ambition. ²¹ We also
			published a Public Sector Net Zero Carbon Reporting
			Guide in 2021 (updated in 2023), along with a tool
			for public sector bodies to calculate and report
			emissions. ²² The Welsh Government Energy Service
			provides technical support and assistance to support
			public sector organisations decarbonise. We also run
			the Wales Funding Programme which provides loan

 ²¹ Net zero carbon status by 2030: public sector route map
 ²² Public sector net zero reporting guide

			 finance to support energy efficiency measures within the public sector. All 13 NHS Wales organisations have developed decarbonisation action plans, and are delivering and reporting against them. The plans set out how the organisations will reduce emissions and contribute to delivery of the NHS Wales Decarbonisation Strategic Delivery Plan.²³ Local authorities, through the Local Government Climate Strategy Panel of representative authorities, have adopted the public sector route map to net zero by 2030 as their strategic framework,²⁴ and coproduced challenging commitments in Net Zero
R2023-029	Mark with local authorities to develop an agreed	2023	Wales, signed off by all 22 local authority leaders. ACCEPT
12023-023	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. CCC PRIORITY	2023	ACCEPT Local government has a wider role in shaping our society-wide transition to low carbon. For example, local government can show leadership on the low carbon agenda through local planning, regeneration and partnerships with the private sector. We will continue to explore with local government what would be most helpful in defining agreed roles and responsibilities.
R2023-030	Share best practice to enable local authorities to improve the quality of their climate action plans.	2023	ACCEPT All local authorities have decarbonisation action plans in place.

 ²³ <u>NHS Wales decarbonisation strategic delivery plan</u>
 ²⁴ <u>Net zero carbon status by 2030: public sector route map</u>

			A review of local authority decarbonisation plans was undertaken in 2021 to identify gaps, to share good practice, and to shape the WLGA support. ²⁵ A second review is about to be completed, due to be published by the end of the year, to identify progress and to focus the next phase of support.
R2023-031	Build on the approach taken in the Active Travel Fund to develop a programme of longer-term funding for local authority delivery on Net Zero that is aligned to their identified roles and responsibilities.	2024	PARTIALLY ACCEPT We will work with partners to better understand their longer-term funding needs. However, we must operate within the budget constraints that are placed upon us, and organisations will also have to consider how they can best use their own budgets to support decarbonisation plans.
R2023-041	Fully assess the level of investment required to decarbonise public buildings and make long-term plans for delivering the funding required. CCC PRIORITY	H1 2024	PARTIALLY ACCEPT We will work with public sector organisations to identify future funding needs and address those needs as far as possible within our budget constraints. Public sector organisations will also have to consider what options they have to utilise their own budgets to support decarbonisation plans.
ISSUE	The current Energy Service grant scheme is due to end in June. The Welsh Government needs to make plans to ensure adequate funding continues to be available to support public sector decarbonisation.	N/A	AGREE We have already put in place a new contract to replace the previous one which ended in March. This will provide continuity of service delivery for public sector and community-led organisations across Wales.

²⁵ Welsh local government decarbonisation planning: Review (September 2021)

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-002	Participate in the planned GB-wide F-gas cap scheme, either administered by the Environment Agency or through a Welsh regulator.	2023	ACCEPT Wales is participating in the GB-wide system to maintain our existing F-gas phase-down trajectory and phase-out of ozone-depleting substances (ODS), and to meet our obligations under the Montreal Protocol. ²⁶ The system covers F-gas and ODS registration, quota, licensing and reporting arrangements. It is administered by the Environment Agency on behalf of Wales, England and Scotland. NRW is also an active participant as regulator. In order to further support the smooth running of GB-wide systems, a Common Framework has been developed and defines the necessary governance arrangements for oversight. The provisional Framework sets out how the UK, Scottish and Welsh Governments will manage a GB-wide system as well as how future changes and potential divergence on policy matters are managed.
R2023-003	Review the use of F-gases in Wales's health service and take action to educate clinicians and patients on the global warming impacts of inhalers.	Ongoing	ACCEPT National respiratory guidelines recommend preferential prescribing of lower carbon inhalers, with associated Key Prescribing Indicators encouraging compliance. Since publication, the guidelines have supported a downward trend in

²⁶ Our F-Gas Regulation ((EU) No 517/2014) requires a 79% cut in the use of hydrofluorocarbons (HFCs) between 2015 and 2030.

prescribing of Metered Dose Inhalers (MDIs). ²⁷ Revised guidelines will aim to further accelerate the reduction of high carbon inhalers.
National patient-facing communications have been developed collaboratively with Asthma and Lung UK to raise awareness of the environmental impact of inhalers. The Community Pharmacy Contractual Framework requires pharmacies to provide advice on 'greener respiratory care' to patients receiving inhaled medicines, using messaging from these national communications.
A Task and Finish group has brought together stakeholders from within and outside government in Wales, and across the UK, to support progress on inhaler initiatives.

Engineered removals

CCC ref.	Recommendation / Issue	Timing	WG response
R2023-049	Carry out a feasibility study that assesses the deployment potential of different engineered removals technologies, considering input requirements including biomass, access to CCS networks and impacts on energy systems.	2024	ACCEPT In Net Zero Wales we committed to undertake "a feasibility study of the different removals approaches, building on existing work in the LULUCF and agriculture sectors" during Carbon Budget 2. This will address the factors identified in the CCC's
			recommendation, with a focus on the implications

²⁷ NHS Wales inhaler carbon footprint reports

			for land use of each approach. The study will also consider how removals approaches would be treated in the net Welsh emissions account, to assess their potential contribution to Wales's targets and carbon budgets.
			The Developing ETS consultation included a Call for Evidence on engineered and nature-based removals to inform further policy development.
ISSUE	Explore the public acceptability of engineered removals in Wales, sharing clear information on how different types of engineered removals work and taking the public's views into account when determining the technologies' role in its Net Zero pathway.	N/A	PARTIALLY AGREEOur feasibility study (R2023-049) will shape our policy position on the role of engineered removals in Wales's targets and carbon budgets.Our Public Engagement Strategy commits to undertaking a review of public engagement on the climate and nature emergencies over the next 12 months. We will use the findings to consider solutions for a more joined-up approach to involving people in climate decision-making, including on engineered removals. If appropriate, we will include information about engineered removals on the Climate Action Wales website to help the public understand these technologies and why they are needed for Wales to reach net zero.

Cross-cutting

CCC ref.	Recommendation / Issue	Timing	WG response
R2022-199	Publish a transparent and quantified link between policies	2022	REJECT
	and milestones, and the emissions reduction they	OVERDUE	Net Zero Wales includes a commitment to improve
	correspond to in the sectoral pathways set out in the		the evidence that underpins our decarbonisation
	Second Welsh Carbon Budget.		pathways, including our understanding of the
	CCC PRIORITY		carbon impact of policy. We are fulfilling these
			commitments as we develop the plan for how
			Wales will meet Carbon Budget 3 (2026-30), which
			we expect will include the quantified emissions
			impact of all policies. Net Zero Wales already
			includes quantified estimates of the emissions
			reduction we expect to see for many of our
		114 2024	transport policies.
R2023-006	Publish a decarbonisation strategy for Welsh Businesses,	H1 2024	PARTIALLY ACCEPT
	including a review of opportunities to prioritise Net Zero		We promote opportunities for decarbonisation
	objectives within Welsh Government incentives,		through our business support policies. We will
	procurement requirements, finance provisions and		consider how the strategic priorities identified by
	planning policy levers.		the CCC can be further promoted to officials, businesses, regulators and other stakeholders.
R2023-007	Strengthen support available to SMEs in Wales to respond	Ongoing	PARTIALLY ACCEPT
12023-007	to Net Zero, including through expanding assistance	Ongoing	We are co-ordinating a strategic approach to
	available through Business Wales and Development Bank		supporting SMEs and their supply chains to respond
	of Wales.		to Net Zero. This includes working with Business
			Wales and the Development Bank of Wales.
R2023-032	Map out interdependencies between reserved and	H1 2024	АССЕРТ
	devolved powers and how they might impact		The CCC's Balanced Pathway suggests that reserved
	decarbonisation in all economic sectors and use the results		powers are relevant to almost 90% of the
	to identify significant risks to the delivery of Net Zero and		abatement required in Wales by 2050. The UK
	construct a plan to manage them.		Prime Minister's decision to change course on net

			zero in September 2023 illustrates the significant risk arising from the current statutory arrangements, whereby Welsh Ministers are largely dependent on UK Government action. This mapping exercise will be useful in developing our plan to meet Carbon Budget 3 (2026-30), which will include how we intend to manage any significant risks identified.
R2023-046	Move forward with plans to develop a long-term strategy to promote a dietary shift, and consider explicitly integrating sustainability considerations and considering setting targets for dietary shifts.	H1 2024	PARTIALLY ACCEPT Environment, Rural Affairs and Health departments are collaborating on a new approach to diet change, undertaking large-scale systems analysis of the dietary choices of the Welsh population. The analysis will include exploration of key leverage points and opportunities to effect positive behaviour change.
R2023-047	Publish the new 'Strategy for Public Engagement and Action', and the new national 'Climate Action Wales' campaign and website in summer 2023, including key topics such as road and air travel, diet and home heating. Establish an effective monitoring approach to track the effectiveness of public engagement communications and campaigns, and share lessons learnt with the UK Government and other Devolved Administrations.	Q3 2023	ACCEPT In July we published our Public Engagement Strategy and launched the Climate Action Wales website. ²⁸ In September we began our national media campaign promoting green choices.
R2023-048	Set out a strategy to support a just transition.	2024	ACCEPT We will be consulting on a Just Transition Framework in December 2023 with a view to

²⁸ <u>Climate Action Wales: Public engagement strategy 2023 to 2026</u> and <u>Climate Action Wales</u>

			publishing a final document in 2024. The Framework aims to bring co-ordination and coherence to just transition planning. It will set out a shared vision for the just transition, principles for using the Well-being of Future Generations Act to guide the transition.
R2023-051	Review existing skills and training programmes in coordination with Scotland, Northern Ireland, and England and set out how these will close Net Zero Skills gaps and where new schemes are needed to address gaps.	Q1 2024	ACCEPT In October we launched a net zero sector skills consultation ²⁹ that aims to build on the knowledge and evidence that informed the net zero skills action plan. ³⁰ The consultation sets out our current understanding of the skills position of each emission sector and aims to identify what skills are needed in the short, medium and longer term. The outcomes of the consultation will include the publication of sector roadmaps that will detail key milestones, and actions to support skills needs. Strong stakeholder engagement is ongoing to help support and gain intelligence on emerging sector needs. A four-nation net zero working group has been set up at official level to promote a joined-up approach and share good practice and learning from across the nations.
R2023-052	Define the skills and workforce requirements for low- carbon manufacturing in Wales and develop policies to	2024	ACCEPT In October we launched a net zero sector skills
	support meeting them.		consultation ³¹ that aims to build on the knowledge

 ²⁹ <u>Net zero sector skills consultation</u>
 ³⁰ <u>Net zero skills action plan</u>
 ³¹ <u>Net zero sector skills consultation</u>

			and evidence that informed the net zero skills action plan. ³² The consultation sets out our current understanding of the skills position of each emission sector and aims to identify what skills are needed in the short, medium and longer term. The outcomes of the consultation will include the publication of sector roadmaps that will detail key milestones, and actions to support skills needs. Strong stakeholder engagement is ongoing to help support and gain intelligence on emerging sector needs. A four-nation net zero working group has been set up at official level to promote a joined-up approach and share good practice and learning
R2023-055	Build on the UK Climate Assembly process and consider the creation of a Welsh Climate Assembly, including to address aspects of climate change policy which most significantly interact with people's everyday lives or may be challenging.	2024	from across the nations. ACCEPT The new Public Engagement Strategy commits to undertaking a review to determine the extent to which public engagement on the climate and nature emergencies is already taking place across Wales, and by whom. We will use the findings to consider solutions for a more joined-up approach to involving people in climate decision-making, including the Welsh Government's role and most effective method(s) for delivering public engagement on a national scale. A number of climate assemblies have already been held in Wales from which we can learn.

³² Net zero skills action plan

ISSUE	Build on the approach taken in [WG's] response to the	N/A	AGREE
	Roads Review to ensure that other areas of decision-		One of the reasons for the Roads Review was to
	making are similarly aligned to the Net Zero pathway.		ensure that the Welsh Government's road
			investment is consistent with Net Zero Wales. In a
			similar vein, we are improving our carbon impact
			assessment process to provide Ministers with better
			and more consistent information on the likely
			emissions impact of their decisions. This includes a
			new requirement for officials conducting a full
			carbon assessment to consider whether their
			proposal is consistent with our published plan for
			meeting the carbon budget.
ISSUE	The structures that enable collaboration between the		AGREE
	nations should be used to involve the devolved		The Prime Minister's unilateral decision to change
	administrations in early-stage policy development and		course on net zero in September 2023
	decision-making on areas that will affect their jurisdictions.		demonstrates the UK Government's contempt for
	These discussions should explore synergies between the		the Welsh Government and other devolved
	respective governments' goals and plans to maximise the		governments on matters of climate policy. It is clear
	benefits that can be delivered across the UK.		that the key process for collaboration between the
			four UK nations, the Inter-ministerial Group for Net
			Zero, Energy, and Climate Change, is not functioning
			as intended. Therefore, we and the Scottish
			Government have called for a new, mutually
			respectful partnership with the aim of developing a
			four-nation approach to net zero in a collaborative
			manner. In the first instance, we requested an
			urgent high-level four-nation summit, chaired by
			the Climate Change Committee.

Area	CCC's risk assessment	UK Government response
Electricity supply	The UK Government lacks a delivery strategy for their 2035 objective [to decarbonise electricity supply].	The Department for Energy Security and Net Zero (DESNZ) recognises the value of a short overarching plan that sets out how the policies come together to decarbonise our electricity system, whilst also delivering a reliable system which minimises costs to consumers. The UK Government is implementing a 'whole system' approach to overseeing delivery of its objectives for building out the future electricity system and will use analytical and portfolio management techniques to inform our position. DESNZ will provide further details on its progress. The UK Government 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 it remains on track to deliver deep decarbonisation in the power sector consistent with the emissions trajectory set out in the <i>Net Zero Strategy.</i> ³³
Industry	The lack of UK-level action is particularly evident for industrial electrification and resource efficiency – two vital areas of industrial decarbonisation.	Currently, the UK Government provides support for fuel switching (including electrification) through the Industrial Energy Transformation Fund (IETF) ³⁴ 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. ³⁵ The UK Government recognises that there are several barriers to fuel switching to electricity. For example, electricity is currently significantly more expensive than natural gas. In July 2023, the UK Government published a Call for Evidence on fuel switching to electrification. ³⁶ The responses will be used to build a greater understanding of the role

UK Government response to the CCC's assessment of high-risk areas

³³ <u>Net Zero Strategy: Build Back Greener</u> (UK Government, 2022)

³⁴ Industrial Energy Transformation Fund

 ³⁵ Industrial Fuel Switching Competition
 ³⁶ Enabling industrial electrification: a call for evidence

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) ³⁷ and future electricity networks. Work has continued throughout 2023 on a joint DESNZ and Defra research project that investigates the potential to unlock carbon savings from resource efficiency measures. The research is supported by a cross-government working group, including waste and resource teams in devolved governments. The research considers 11 industrial sectors, ranging from heavy industry to consumer product manufacturers. The research will support the development of evidence-based resource efficiency policies that will deliver carbon savings in industry across the whole of the UK, building on the strategic framework outlined in the 2023 'Maximising Resources, Minimising Waste' programme ³⁸
and <i>Carbon Budget Delivery Plan</i> . ³⁹ 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. 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 against waste reduction targets.
Work is also progressing at pace on innovative projects that will improve data across

 ³⁷ <u>Review of electricity market arrangements</u>
 ³⁸ <u>Waste prevention programme for England: Maximising Resources, Minimising Waste</u>
 ³⁹ <u>Carbon Budget Delivery Plan</u> (UK Government, 2023)

		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 Data 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. ⁴⁰
Industry	There is a lack of clarity of what some UK policies mean for Wales. For example, as SWIC [South Wales Industrial Cluster] is not a Track 1 cluster, it is not clear how Welsh industry will be supported to adopt CCS and hydrogen. The UK Government has detailed policy mechanisms for both CCS and hydrogen. However, these are currently focussed on industrial clusters with access to local storage of carbon dioxide. It is unclear how most industrial sites in Wales will be supported to adopt these technologies.	The UK 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. The UK 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 UK 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 UK 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. It will set out a vision for the UK CCUS sector later in 2023 to raise confidence and improve visibility for investors. Additionally, the UK 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.

⁴⁰ <u>Circular Economy Hub</u>

Industry	To achieve industrial	The UK Government recognises the importance of working internationally to address
	decarbonisation in Wales the	carbon leakage and the need to also consider domestic policies to ensure that UK
	UK Government must	decarbonisation efforts lead to a true reduction in global emissions.
	introduce policies to protect	
	local industry from high- carbon imports.	On 30 March, the UK Government published an exploratory consultation considering a range of potential policy measures to mitigate carbon leakage risk in the future and ensure UK industry has the optimal policy environment to decarbonise. ⁴¹ Potential policies include a carbon border adjustment mechanism, mandatory product standards, and other policy measures to help grow the market for low carbon products, as well as emissions reporting which could support the implementation of potential mitigation policies.
		The UK Government is considering the responses to the consultation and will then issue
		a response.
Fossil fuel supply	We have set out in recent letters to Government our view of the overwhelming evidence against new consents for coal exploration or production, and our	Coal's share of the UK's electricity generation has already declined significantly in recent years – from almost 40% in 2012 to around 2% in 2022. In line with the UK's net zero target, the UK Government is committed to 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.
	support for tighter limits on UK oil and gas production, with stringent tests and a presumption against	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.
	exploration.	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.

⁴¹ Addressing carbon leakage risk to support decarbonisation

		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). ⁴²
		The UK Government has implemented a Climate Compatibility Checkpoint to check whether offering new oil and gas licences remains compatible with meeting the UK's climate targets. ⁴³ The emissions tests in the Checkpoint give Ministers key information to assess the climate impacts of 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 UK 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.
Hydrogen supply	We have called on the UK Government to finalise	The UK Government is working at pace to finalise funding mechanisms and allocate funding to support its up to 10GW hydrogen production capacity ambition. In August

 ⁴² National Planning Policy Framework (England)
 ⁴³ Climate compatibility checkpoint design

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	funding mechanisms to support the development of low-carbon hydrogen production and accelerate the development of business models for hydrogen transportation and storage, both seen as crucial to the delivery of a hydrogen	 2023, the UK Government published the Hydrogen Production Business Model (HPBM) contract – the Low Carbon Hydrogen Agreement (LCHA).⁴⁴ It aims 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 from 2024, subject to matters such as due diligence and negotiations. Later this year, the UK Government will launch a process to identify and select additional, viable projects in the Track-1 CCUS clusters that can become operational by
	industry.	2030 as well as via the Track 2 process. It intends to launch the second electrolytic hydrogen allocation round this year, and earlier this year published a Call for Evidence on moving to annual competitive allocation rounds. Hydrogen production are expected to comply with the requirements of the UK Low Carbon Hydrogen Standard to receive support under the HPBM and NZHF. Hydrogen transport and storage infrastructure will be critical to enabling our hydrogen
		ambitions, securing additional private sector investment across the UK. The UK Government published its minded to position and its response to the Hydrogen Transport and Storage Infrastructure Consultation on 2 August 2023. ⁴⁵
Bioenergy supply	The UK Government has previously committed to publishing a Biomass Strategy in 2022 this is not yet published.	The Biomass Strategy was published in August 2023. ⁴⁶
Owner-occupied and private-	Many policies which will be critical to decarbonising buildings are still being	The UK Government is proceeding with legislating for the introduction of the Clean Heat Market Mechanism through the present Energy Act. Draft scheme regulations are in development and will be introduced to Parliament in due course, ahead of the scheme's

 ⁴⁴ <u>Hydrogen production business model</u>
 ⁴⁵ <u>Proposals for hydrogen transport and storage business models</u>
 ⁴⁶ <u>Biomass Strategy</u> (UK Government, 2023)

rented homes	developed by the UK	launch in 2024.
(nonfuel-poor)	Government, including: * the market-based mechanism for low-carbon heat * updated minimum energy efficiency standards for private rented homes * phase-out dates for fossil fuel boilers * financial incentives to support widespread building retrofits * improvements to EPCs and EPC assessments	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 UK Government will not be requiring landlords to improve the energy efficiency of their property to higher standards than those currently required by legislation. However, the UK Government continues to encourage households to improve the energy efficiency of their homes where they can. It is 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 Insulation Scheme up to March 2026. As the Prime Minister set out in a speech on Net Zero on 20 September, the UK Government aims 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.
		improving Energy Performance Certificate (EPC) metrics, taking into account the CCC's recommendations, and intends to consult on these in the months ahead.
	Many policies which will be critical to decarbonising non- residential buildings are still being developed by the UK Government.	The <i>Powering Up Britain</i> announcement 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 UK 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. It has reviewed the responses to its consultation on minimum energy efficiency
		standards in the non-domestic private rented sector and is working hard to review the policy design to ensure it remains fair and appropriate for landlords and tenants. The UK Government plans 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.
Aviation – demand management	The UK Government's Jet Zero Strategy commits to increasing terminal passengers by 70% compared	UK Government analysis in the <i>Jet Zero Strategy</i> shows that the UK can achieve its net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits. ⁴⁷
	to 2018 levels by 2050. The UK Government's pathway for aviation relies on nascent technology being scaled and deployed relatively quickly for commercial use. There is no policy framework in place that would mitigate demand growth if these technologies were not deployed as planned.	The <i>Jet Zero Strategy</i> modelling forecast a 70% increase in UK terminal passengers by 2050 relative to 2018 levels. The modelling has since been updated to reflect the latest macroeconomic conditions and was published in the <i>Jet Zero Strategy One Year On</i> document. ⁴⁸ The latest modelling has reduced forecast passenger demand growth to 52% in 2050 relative to 2018 levels under the <i>Jet Zero Strategy</i> "high ambition" scenario. The UK Government has committed to reviewing the <i>Jet Zero Strategy</i> every five years to ensure the aviation sector is on track to achieve net zero by 2050. If it finds that the sector is not on track, it will consider what further measures may be needed.
Sustainable aviation fuel	The SAF mandate consultation is delayed and	The UK Government has previously committed to have the Sustainable Aviation Fuel (SAF) mandate legislation in place by 2025 and it is on track to deliver this.

 ⁴⁷ Jet Zero strategy (UK Government, 2022)
 ⁴⁸ Jet Zero strategy: one year on (UK Government, 2023)

	needs to be operational by 1 January 2025.	The UK Government has 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 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 UK 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.
Shipping	Wider maritime decarbonisation is dependent on uptake of zero-emission vessels by national and multinational shipping operators and provision of the required refuelling infrastructure at destination ports across the rest of the UK and overseas.	 The UK Government is supporting the investment and uptake of low carbon maritime fuels. 1. 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. 2. As part of the refreshed Clean Maritime Plan, the UK Government will set out policies which will increase the use of low carbon maritime fuels.⁴⁹ 3. The strategy will help lay the ground for the role of low carbon fuels in meeting the UK Government's Net Zero commitments by 2050. As part of the strategy DfT will set out demand scenarios for different types of low carbon fuels based on current modelling and data on feedstock availability (supply) and potential demand; these will help identify risks and opportunities, including where different sectors might compete for the same feedstocks and fuels.

⁴⁹ <u>Clean maritime plan: Maritime 2050 environment route map</u> (UK Government, 2019)