

Net Zero Wales Plan Research Briefing

December 2021



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Net Zero Wales Plan

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1. Net Zero Wales

The Welsh Government published **Net Zero Wales Carbon Budget 2 (2021-25)** (“the Net Zero Plan” or “the Plan”) on 28 October 2021. It sets out how Wales will meet its second carbon budget (CB2), and to build the foundations for Carbon Budget 3 (CB3) and the 2030 emissions reduction target, as well as net zero by 2050. The targets and budgets are summarised in this Senedd Research article on the **Path to Net Zero**.

1.1. What is the decarbonisation framework for Wales?

The Net Zero Plan fulfils the Welsh Minister’s statutory duty (under the Environment (Wales) Act 2016) to prepare and publish a report, before the end of 2021, setting out the policies and proposals for meeting the CB2. It contains 123 policies and proposals across all ministerial portfolios. The plan follows the low carbon delivery plan (LDCPI) for Carbon Budget 1 (CB1), **Prosperity for All: A low carbon Wales**, published in March 2019.

The targets and budgets followed the **recommendation of the Committee on Climate Change (CCC)**, which found this emissions reduction pathway to be in line with global pathways consistent with meeting the Paris Agreement 1.50 C goal. The Net Zero Plan states (emphasis added):

We have accepted the recommendations from the CCC about **what** the targets should be, but we are setting out our own path about **how** to get there. This means that while we have taken the CCC’s advice very seriously and it has informed our thinking in developing this Plan, **we have generated a set of ambitions and actions which are different from their model and which better reflect the geography, culture and economy of Wales.**

1.2. How is the Plan structured?

The Plan has five sections:

- Setting the context – outlining the vision for 2050, Wales’ greenhouse gas emissions to date, decarbonisation pathway, building an evidence base, and consumption emissions;

- Setting the conditions – the Welsh Government’s approach, what it is already doing, what more will happen during CB2, and the “Team Wales” approach to enable change;
- Introduction of framework, emission sector chapters and methodological approach;
- Monitoring and reporting; and
- Next steps.

It is **accompanied by** a sustainability appraisal and an All Wales Plan capturing actions being taken by business, communities, individuals, the public and third sector.

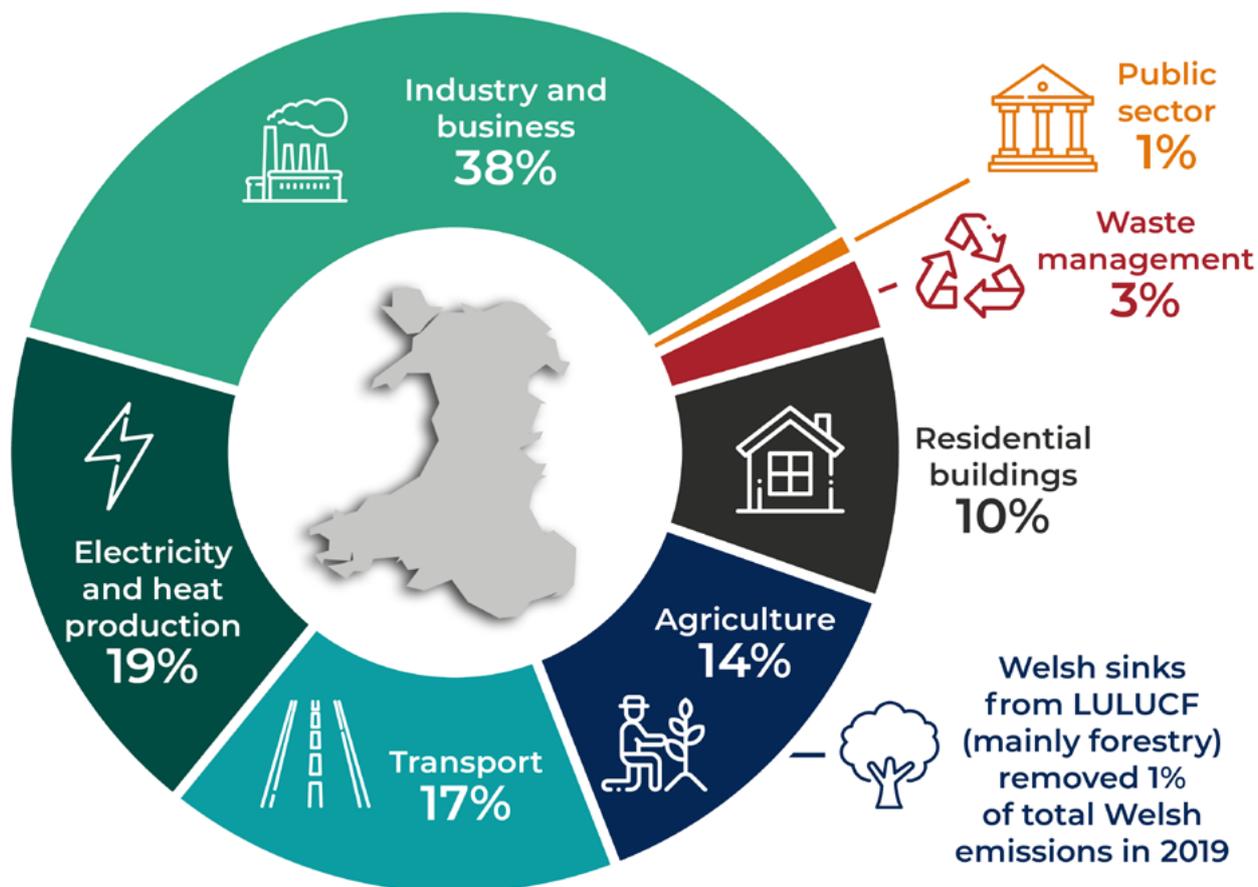
1.3. What about consumption emissions?

The *Environment (Wales) Act* requires the Welsh Government to publish an estimate of “Welsh consumer emissions”. These are emissions that may reasonably be attributed to the consumption and use of goods and services in Wales, whether produced in Wales or elsewhere. This must be laid after each carbon budget period. The first report will be published in 2022, covering the consumption emissions for Carbon Budget 1 (2016-2020).

2. What progress has been made in reducing emissions in Wales?

Emissions in Wales **increased by 0.2% from 2018 to 2019**. The following graphics outline the share of emissions by sector, and whether they have increased or decreased (since 2018, and since the 1990 baseline). There have been some changes in sector definitions. Transport, Aviation and Shipping are now combined under “Transport”; and Business, Energy Supply and Industrial Processes are now covered by “Industry and Business” and “Electricity and Heat Production”

	1990 (base year) - 2019	2018 - 2019
Agriculture	-10.0% ▼	+1.8% ▲
Industry and business	-37.5% ▼	+5.3% ▲
Electricity and heat production	-35.0% ▼	-10.0% ▼
Public sector	-57.8% ▼	-3.1% ▼
Residential buildings	-25.3% ▼	-1.0% ▼
Transport	-6.3% ▼	-2.2% ▼
Waste management	-64.2% ▼	-2.8% ▼



Source: Infographics from the Welsh Government

The Welsh Government's modelling suggests that Wales is **on track to meet CB2 (37% reduction) and will achieve a 44% reduction** against the baseline. 2020 data, and therefore confirmation of whether CB1 has been met, will not be available until 2022.

3. Policies and proposals to set the conditions

As well as the sector specific policies and proposals (below) the Plan includes a range of policies and proposals to show 'how' the Welsh Government will shape its emissions reduction approach, including:

Policy 1: Just Transition – to consider the impacts of climate action in all areas, mindful that action could potentially resolve or exacerbate existing inequalities;

Policy 2: Nature Emergency – embedding the nature emergency response in all Welsh Government work;

Policy 3: The Clean Air Plan, decarbonisation and Natural Resources Policy – integrating these areas to achieve complementary outcomes;

Policy 4: Building climate resilience and reducing emissions in complementary ways;

Policy 5: A circular economy;

Policy 6: Planning Policy Wales – using planning to facilitate decarbonisation;

Policy 8: Updated Budget Improvement Plan – setting out actions taken to consider how assessment of the carbon impact of spending decisions can be more robust. The updated plan will be provided alongside the 2022-23 draft budget; and

Proposal 1: Develop a long term strategy to promote a dietary shift to a healthier and suitable diet.

4. A sector by sector overview

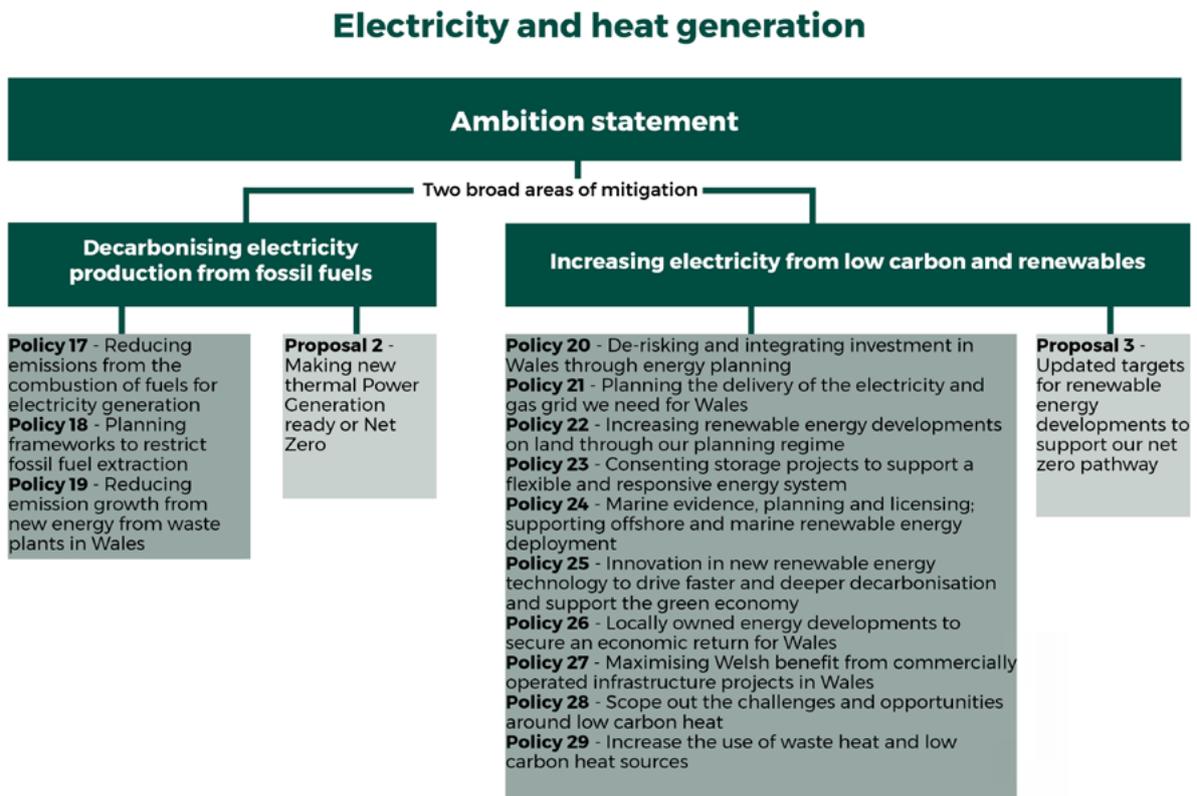
4.1. Electricity and heat generation

Covering production of electricity from fossil fuels, low carbon and renewable generation, and generation and supply of heat.

What is the ambition for the sector?

By 2025 1GW additional renewable energy capacity will be installed;
 From 2021 there will be no new build unabated fossil fuel generation in Wales. All current unabated gas generation removed from the system by 2035; and
 In this high renewables system, any additional supply will be met from decarbonised power plant from 2035 at the latest.

How will the targets be achieved?



4.2. Transport

Transport sector emissions include those from Welsh road vehicles and rail, and Wales’ share of international aviation and shipping emissions.

The Welsh Government has adopted a **new approach** for the transport section—**modelling the carbon impact of individual policies**, and how this would impact CB2. It states it is aiming to take this approach in all policy areas for CB3.

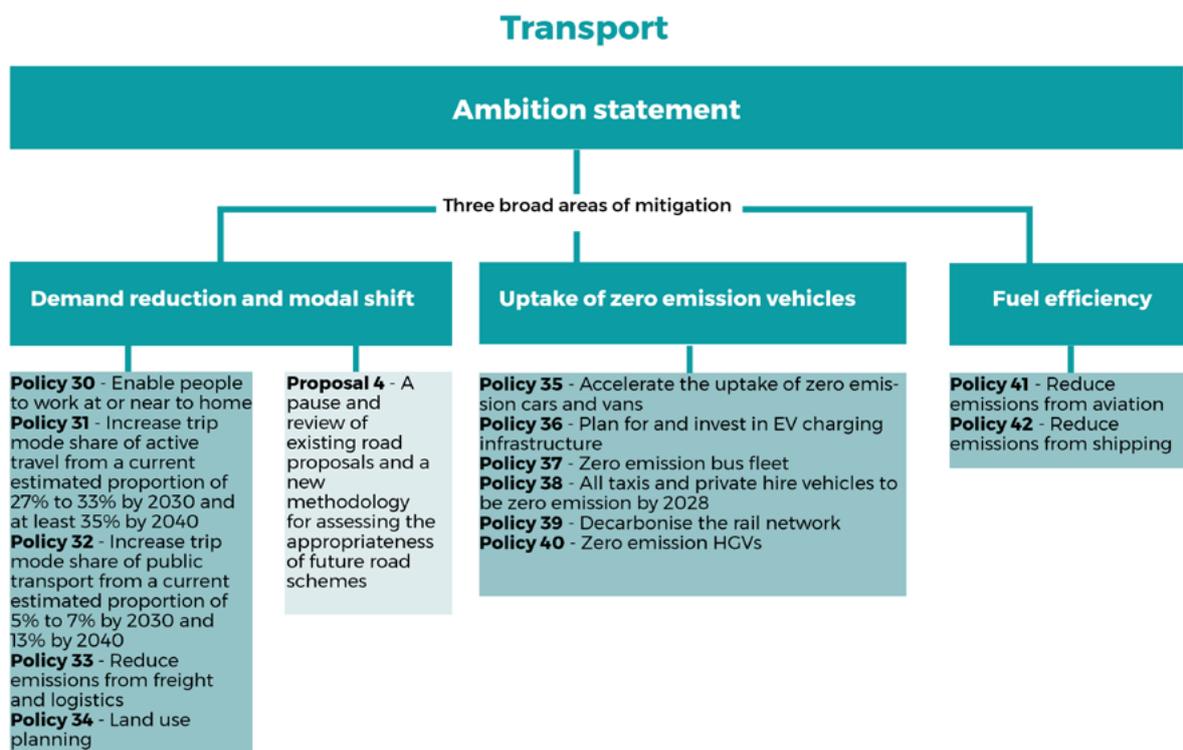
What is the ambition for the sector?

To reduce emissions from passenger transport by 22% in 2025 (from 2019) and 98% in 2050 through demand reduction, modal shift and the uptake of low carbon technologies;

To reduce car miles travelled per person by 10% by 2030 and increase the proportion of trips by sustainable travel mode (public transport and active travel) to 35% by 2025 and 39% by 2030; and

By 2025 10% of passenger car travel will be by zero emission car and 48% of new car sales will be zero emission, provide a comprehensive network of EV charge points, and have transitioned to a large proportion of bus, taxi and private hire vehicles fleet to zero emission vehicles.

How will the targets be achieved?



4.3. Residential buildings

This sector covers emissions from energy use in homes, and work to reduce embodied carbon in constructing and retrofitting residential properties.

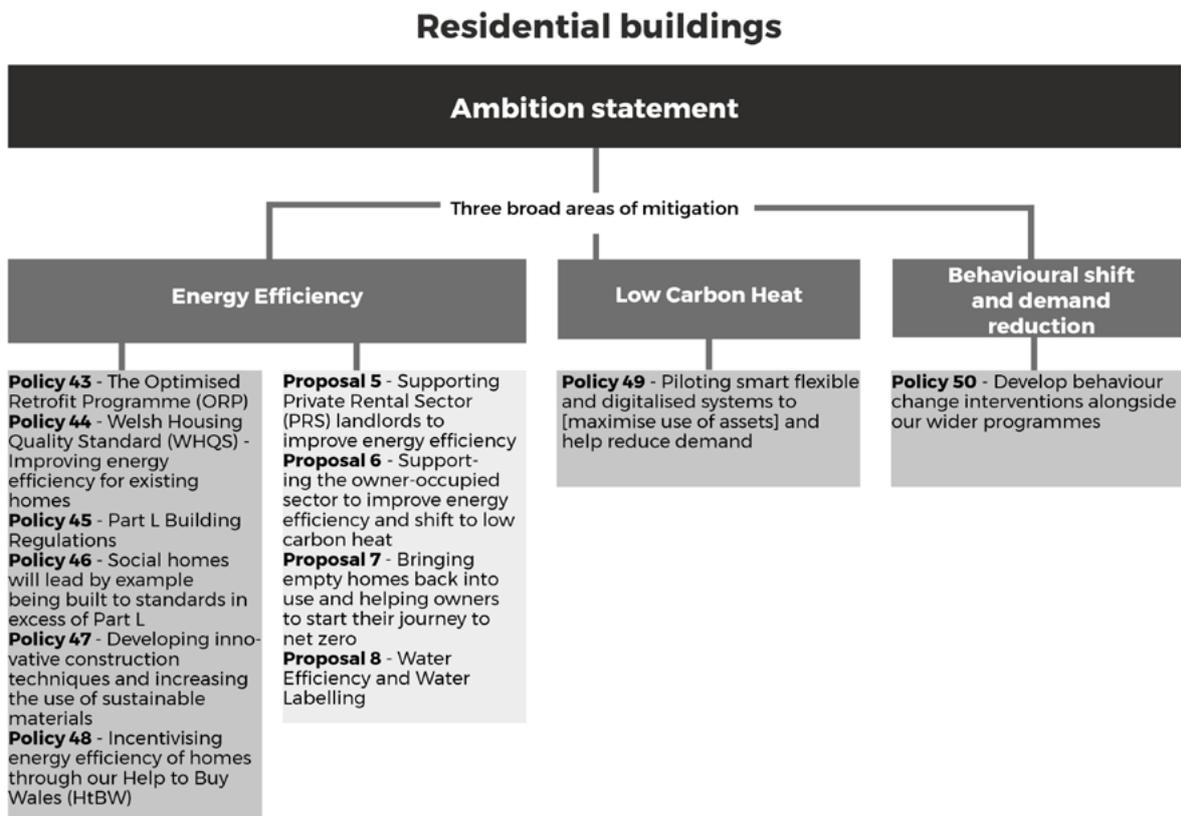
What is the ambition for the sector?

By 2025 around 148000 Welsh houses to receive retrofit measures reducing heat loss;

By 2025, to move from fossil fuels by increasing the proportion of heat that is electrified by 3%; and

By 2025 all new affordable homes in Wales will be built to net zero carbon, and that net zero standards will be adopted by developers of all new homes regardless of tenure by this date.

How will the targets be achieved?



4.4. Industry and business

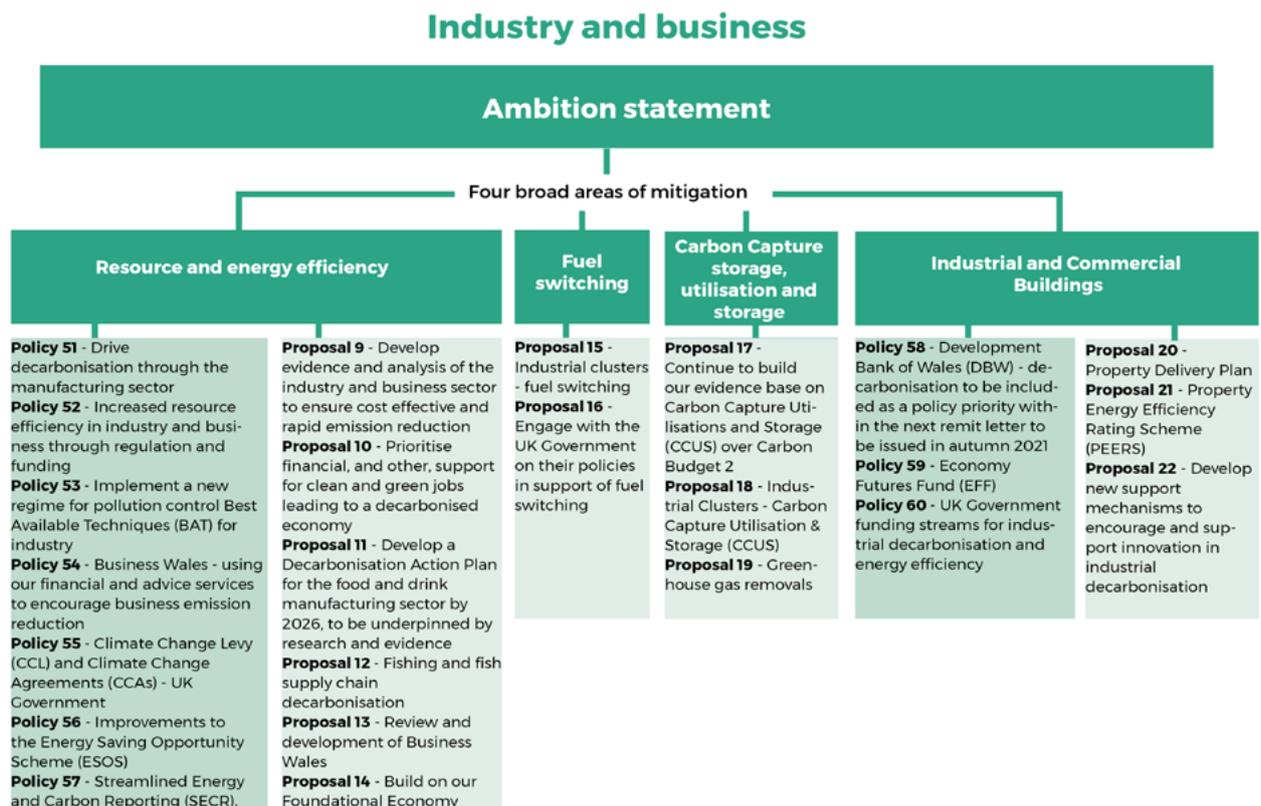
This sector includes manufacturing, construction, operation of machinery, food processing and the extraction and production of fossil fuels.

What is the ambition for the sector?

By 2025 to see a 4% decrease in industrial energy usage due to energy efficiencies whilst building a well-being economy; and

By 2025 to see an average 3% increase in electrification in industrial processes and an average 3% growth in hydrogen as a fuel. During CB2, the primary foundations for further industrial transformation will be laid through UK ETS policies. It also expects the UK Government's net zero industrial strategy to enable increased electrification, fuel switching, and carbon capture and storage from the 2030s.

How will the targets be achieved?



4.5. Agriculture

The agriculture sector covers soil, livestock, and waste and manure management.

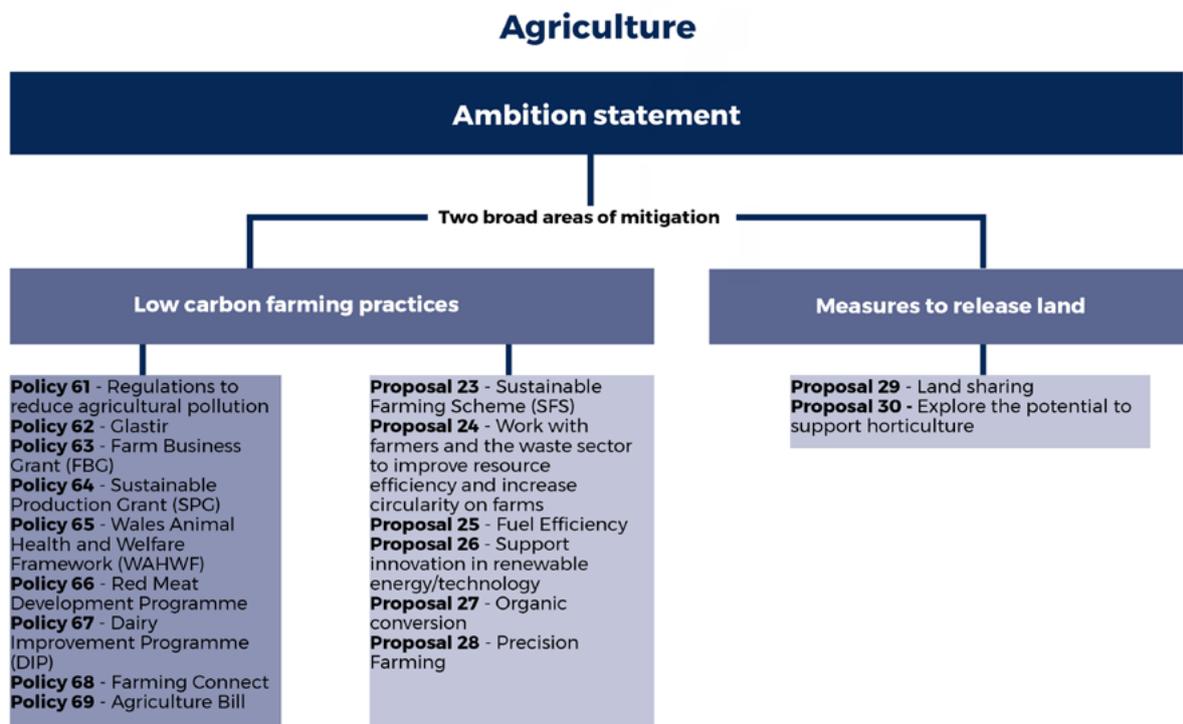
What is the ambition for the sector?

The Plan says:

The new Agriculture Bill will be the biggest policy change the agriculture sector has seen in decades, our main goal within this carbon budget period will be supporting and preparing the sector to transition into a new way of working, reducing their overall business carbon footprint.

During CB2 the Welsh Government will develop its **Sustainable Farming Scheme**. It aims to enable the transition through pilots and interventions supporting low carbon farming practices and land use change. 10% of agricultural land will be shared to support tree planting by 2050, while maintaining a strong food production sector across Wales.

How will the targets be achieved?



4.6. Land Use, Land Use Change and Forestry (LULUCF)

The LULUCF sector covers carbon emissions and sinks associated with land use, including from forestry, urban land use and peatland. This is the only sector in CB2 with capability to remove emissions from the atmosphere.

What is the ambition for the sector?

The Welsh Government’s aims to increase woodland creation rates, committing to supporting 43,000 hectares of new woodland by 2030, and 180,000 hectares by 2050. It aims for over 3000 hectares of peatland to be on a recovery pathway by 2025.

How will the targets be achieved?



4.7. Waste management

Covering the collection and treatment of waste and recycling.

What is the ambition for the sector?

By The Welsh Government aims for Wales to become a zero waste nation by 2050. This means virtually no materials buried or burned, and effectively a 100% re-use and recycling rate. The sector will support the wider transition to a circular, more resource efficient and net zero carbon economy. In addition:

By encouraging behaviour change and improved waste management, it aims to reduce the amount of waste sent to landfill, prioritising reduction of biodegradable waste to as close to zero as possible by 2025; and
By 2025, reduction in greenhouse gas emissions from landfill of 19% compared to 2019.

How will the targets be achieved?



4.8. Public sector

The public sector's role is to remove carbon from its own estate, and within its leadership and operations. 'Public sector' includes: NHS Cymru; the Welsh Government; local government, ; National Parks Authorities; Fire and Rescue Authorities; Natural Resources Wales (NRW); eight universities; others (culture, sport, education); and Senedd Cymru (tbc).

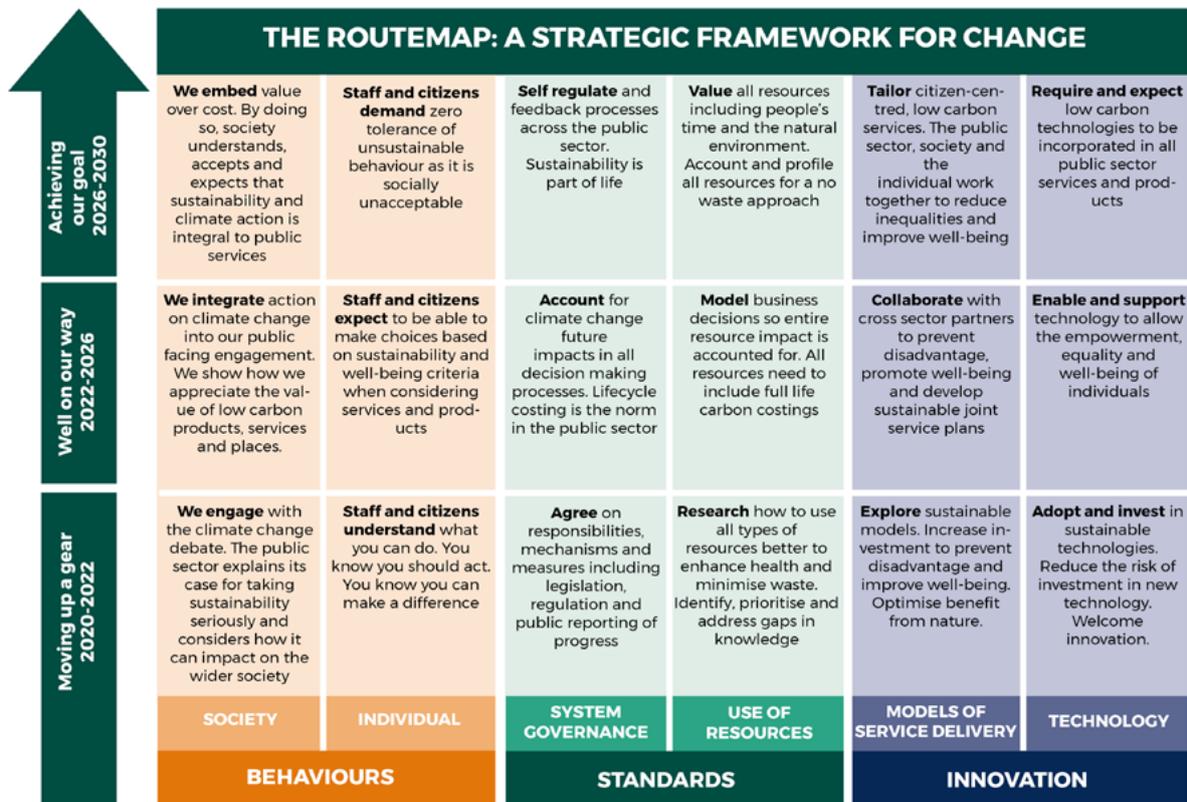
What is the ambition for the sector?

For the public sector to be collectively net zero by 2030.

How will the targets be achieved?

The public sector chapter does not contain specific decarbonisation policies and proposals. It provides an overview of support tools available, best practice, and case studies. It reiterates actions the public sector needs to leverage to drive progress. The main tool is the decarbonisation Route Map (see below). It provides a strategic

overview of the priority areas for action, and milestones needed for the Welsh public sector to collectively meet net zero by 2030.



5. How will delivery of the plan be monitored?

The Plan outlines a number of ways the Welsh Government will monitor delivery, including:

- **Legislation** requiring it to produce an assessment against targets and budgets every five years. The next report is due in 2022;
- **Indicators** tracking general progress towards targets and budgets on an annual basis. Publication of the Wellbeing of Wales report annually;
- **A monitoring and reporting system** looking in more depth at the policies within the Plan;
- CCC progress reports; and
- Senedd scrutiny.

6. What do stakeholders think of the plan?

Overall **stakeholders** welcomed the Plan, but identified areas they believe require further consideration.

The need for clearer presentation of the carbon budget and links to the Welsh Government budget

The Wales Centre for International Affairs (WCIA) calls for the **estimated or anticipated emissions reduction, including milestones, for each action in the Plan as a contribution to the overall CB2..**

WWF Cymru questions the absence of **sectoral targets**. It believes omitting these targets creates a **lack of clarity about whether the ambition is at the scale and pace required..** It highlights this is particularly important for the agriculture sector, due to the lack of progress on agricultural emissions reduction.

The Future Generations Commissioner highlights a “disappointing lack of clarity” on the Welsh Government approach **to assessing the carbon impact of budget decisions, and the lack of a commitment to adopting the “net zero test”** recommended by the CCC.

The Plan should be a live, evolving document to ensure it meets its aims

NRW welcomes most of the policies and proposals, and hopes the Plan is **maintained as a live document** evolving over its five year lifespan. It calls for the ambitions to be aligned with the urgency for action and latest scientific evidence, and to assess whether considered policies and proposals are adequate to meet intended aims. It also calls for the **inclusion of key milestones and deadlines/ targets for delivering individual proposals** during the Plan period, so barriers or challenges to delivery can be addressed in a timely way.

The Welsh Government needs to improve its engagement approach

Stakeholders are disappointed with the Welsh Government's **lack of engagement and collaboration on the Plan**, and more widely on its climate change mitigation and adaptation work. The WCIA highlights that the Welsh Government's decarbonisation team is open to dialogue with stakeholders, but in practice this puts the onus entirely on overstretched organisations with little capacity to lobby the Welsh Government.

Whilst a number of stakeholders welcome the focus on individual behaviour change in the Plan, the Future Generations Commissioner believes it is the **Welsh Government's role to lead the way**, and this should have been emphasised more strongly.

The seas play a vital role in climate ambition

The Marine Conservation Society welcomes the Plan, and makes a number of recommendations, particularly on the role of the Wales National Marine Plan in protecting blue carbon, and the need for a national plan for the sustainable management of fisheries/decarbonisation of the fishing industry.

RSPB highlights the importance of the seabed as a carbon store, and suggests the development of blue carbon marine habitats should be prioritised.

Lack of detail about how the climate and nature emergency will be tackled together

Wildlife Trusts Wales (WTW) **expresses concern** over the lack of urgency on nature recovery, believing the Plan's scale and pace of action does not match the severity of the climate and nature crisis. This is supported by WWF Cymru and RSPB, which outlines the potential for damage to nature by pursuing climate change focused actions, and vice versa. It calls on you to explore the role of nature based solutions, beyond tree planting, focusing on restoring and maintaining habitats.

The Nature Friendly Farming Network (NFFN) calls for more ambitious peatland restoration targets. On tree planting, it highlights the need for the right trees to be planted in the right place. Coed Cadw calls for clarity on the aspirations and quality criteria to be used to assess the state of Welsh woodland in 2030 and 2050.

A welcome focus on residential buildings

Community Housing Cymru (CHC) welcomes the Plan, but emphasises the need for funding to match ambition. It calls for greater clarity around the ambition that by 2025 148000 homes to have received retrofit measures to reduce heat loss. In particular the number of these homes to be social rented homes. Policies on residential heating were also welcomed by Friends of the Earth (FOE) Cymru.

Skills for net-zero

Skills for a green transition was a key point in your **discussions with Lord Deben and Sophie Howe** this term. **Wales TUC welcomes the plan**, and recognises it presents an opportunity to create jobs in renewable energy, sustainable housing and low carbon infrastructure. FOE Cymru welcomed the green skills action plan.

WWF called for more recognition of the green skills requirements for regenerative farming and wider nature restoration, rather than the current focus on infrastructure jobs. The Future Generations Commissioner supports this, calling for Wales to create high quality eco-literate jobs.

Calls for a more rural focus

The **CLA** questions whether the Plan's ambition is deliverable, arguing it lacks a rural focus, particularly on housing. It also highlights the importance of locally sourced sustainable food, and calls for greater support for smaller scale renewable energy projects. The NFFN questions the steps the Welsh Government will take to achieve more localised supply chains, and the role the Community Food Strategy will play.

NFU Cymru expresses concern that climate change targets will be achieved at the expense of domestic food production and "the vitality of our local areas". It refers to the Plan's ambition to substantially decrease consumption of red meat and dairy products in line with CCC advice. It highlights the nutritional benefits of red meat and dairy as part of a balanced diet, and the sustainable production practices in Wales. It believes there are compelling reasons for the Welsh Government to deviate from the CCC's advice, as it has in other areas.

On the issue of a "just transition", NFU Cymru is disappointed that the Welsh Government has chosen not to establish a Just Transition Commission, which it considers "essential if the burden of decarbonisation is not to fall unequally on rural communities". The just transition issue is also raised by the Farmers' Union of Wales (FUW), which says this is required to ensure farm businesses are financially viable to adopt low carbon farming practices and contribute to tackling climate change.

The FUW is disappointed at the lack of policies focusing on increasing the carbon sequestration of existing habitat on farms. It says improving management of existing woodland, hedgerows and soil organic carbon in grasslands can create larger carbon sinks, alongside providing for biodiversity.

7. What are the aims of the UK Government's Net Zero Strategy?

The UK Government published its **Net Zero Strategy** in October 2021. It sets out the Government's plan to halt the UK's domestic contribution to climate change by 2050. It outlines the Government's vision for a decarbonised economy, and how the UK will meet Carbon Budgets 4 and 5, and its **Nationally Determined Contribution (NDC)**.

7.1. The UK Government's vision for 2050

In the Strategy, Boris Johnson states achieving net zero by 2050 will not require the 'sacrifice' of the 'things we love' and envisages that in 2050:

...we will still be driving cars, flying planes and heating our homes, but our cars will be electric [..], our planes will be zero emission [..], and our homes will be heated by cheap reliable power drawn from the winds of the North Sea.

The UK Government's approach will aim to follow four principles:

- Uphold consumer choice;
- Protect the most vulnerable through Government support;
- Reduce the cost of low carbon tech by working with businesses; and
- The biggest polluters pay the most for the transition.

7.2. What does the Strategy say?

The Strategy outlines policies to cut emissions in six key areas of the economy: Power; Fuel Supply and Hydrogen; Industry; Heat and Buildings; Transport; and Natural Resources, Waste and F-Gases.

These policies are supported by commitments to accelerate development of greenhouse gas removal technologies.

As part of the Strategy, the UK Government:

- Commits to fully decarbonising electricity by 2035, 'subject to security of supply';
- Commits to ending the sale of new petrol and diesel cars and vans from 2030;
- Aims to phase out the installation of new and replacement natural gas boilers by 2035;

- Will support the development of carbon capture usage and storage (CCUS), for industry and across the economy;
- Sets an ambition to deploy 5 MtCO₂ /year of engineered CO₂ removals by 2030; and
- Will seek an amendment to the **Climate Change Act 2008** to enable engineered CO₂ removals to contribute to the UK carbon budgets.

The UK Government states the commitments in the Strategy will ‘unlock’ up to **£90 billion of private investment, and support 440,000** jobs in green industries by 2030.

7.3. ‘A coordinated approach’ with Devolved Administrations

In the Strategy, Kwasi Kwarteng, the Secretary of State for Business, Energy, and Industrial Strategy, states the UK Government will take a ‘coordinated approach’ working with Devolved Administrations.

The Minister for Climate Change, Julie James, said she was **‘despondent’** at the UK Government’s approach to working with Wales on the Strategy. She said the Welsh Government had no involvement in the Strategy since July 2020, and was given insufficient time to view the advanced copy before publication.