



Llywodraeth Cymru
Welsh Government

Welsh Government 2024

Heat Strategy for Wales

ACTION PLAN

The path to net zero heat in Wales
by 2050 across all sectors

July 2024

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Turning Strategy into Action

Our Strategy

The Draft Heat Strategy for Wales was published in the summer of 2023 for consultation. This Action Plan is published alongside the final Heat Strategy for Wales and our response to the consultation in the summer of 2024.

The Heat Strategy for Wales sets out the long term overarching requirements for Wales. It will be a constant and firmly sets the direction of travel.

Our Approach to Action Planning

The Action Plan focuses on creating the enabling environment required for the transition. On that basis, the Action Plan covers the detailed actions related to the objectives and policies for the Enabling Framework. Responsibility for the policies and actions for housing, businesses, industry and public sectors has been set to the relevant Welsh Government policy teams.

The Action Plan builds on the tiered approach taken in the Heat Strategy for Wales. The Vision, Objectives, and Policies are set in the Strategy, with the next tier of Actions to be set as this Action Plan.

Vision	Objectives	Policies	Actions
<div>1 Vision</div> <div>'Clean, affordable heat will be available for all – we will recognise the opportunity of the transition and will secure our future well-being with a sustainable low carbon economy.'</div>	<div>17 Objectives</div> <div>Across the sectors of:<ul style="list-style-type: none">- enabling framework- energy networks- homes- businesses- industry- public services</div>	<div>57 Policies</div> <div>To meet the vision and objectives, using the levers of:<ul style="list-style-type: none">- collaboration- leading the way- support- influence- policymaking</div>	<div>Actions</div> <div>To deliver the policies, considering the near-term action required.</div> <div>Delivered across Welsh Government and its partners.</div>

Vision

Our Vision:

Clean, affordable heat will be available to all – we will recognise the opportunity of the transition and will secure our future well-being with a sustainable low carbon economy.

Objectives



Our enabling framework - facilitate a just transition

- a) Planning processes are transparent, streamlined, and fit for purpose - supporting the efficient rollout of low carbon heat solutions
- b) Low carbon heat is understood and supported by heat users in all sectors - collaboration and knowledge sharing have driven demand-side momentum towards net zero heat
- c) Our highly-skilled workforce supports local suppliers and manufacturers serving the transition in Wales – new talent, investment, and innovative solutions are drawn into Wales
- d) The costs of the transition are fairly distributed across society and benefits from this transition support the economy and our communities



Our energy networks – shaping the future of heat supply

- e) Flexible and secure electricity networks have the infrastructure in place to effectively support electrified heat as part of a net zero energy system
- f) Heat networks are a reliable and efficient provider of low carbon heat in suitable areas across Wales
- g) Wales will support the utilisation of low carbon hydrogen where it enables a sustainable and just transition towards decarbonisation, for example, at localised hydrogen hubs where industries are dependent on high-temperature processes, and for other hard to decarbonise solutions



**Our homes –
affordable warmth
for all**

- h) A clear regulatory framework will be in place that supports net zero homes across all rented, owner-occupied, and social housing
 - i) Homes are thermally-efficient and served in the main by heat pumps – a whole building approach has been taken to the transition and homeowners understand how to operate their systems
 - j) Low carbon heat solutions will be affordable to install and affordable to operate
-



**Our businesses –
supporting our local
economy to flourish**

- k) Businesses in Wales will be sustainable and supported by affordable low carbon heat solutions
 - l) Businesses will have the confidence to invest in the transition to low carbon heat and net zero buildings
 - m) Our businesses and commercial properties will demonstrate their net zero credentials, building confidence and engagement with consumers
-



**Our industry -
fostering
innovation and
investment**

- n) Industry is transitioned to affordable low carbon heat, competitive, and sustainable for the long-term following implementation of best available techniques
 - o) Low carbon hydrogen hubs are established and serving high-temperature industrial processes and local users where appropriate
-











**Our public services
– leading by
example**

- p) The public sector are leaders in the transition to net zero – working towards net zero by 2030 and supporting delivery on a regional and local basis to recognise the benefit to Wales
- q) All public sector buildings will be served by low carbon heat solutions – championing a whole building approach to the transition

Timeline of key policies




SHORT - TERM (2024 – 2030): an enabling environment is created, providing the conditions required for the transition to happen at speed and scale

-  Ensure planning rules for heat pumps are fit for purpose
-  Develop our approach to phasing of out fossil fuel boilers
-  Engage with the UK Government on future electricity pricing compared to natural gas
-  Develop our Just Transition to Net Zero Framework and deliver on our plan to tackle fuel poverty
-  Support the reform of power network planning and investment to ensure grid reliability
-  Engage with educational institutions to implement our Net Zero Skills Action Plan and build low carbon skills
-  Progress non-domestic rates support for the installation of low carbon heat technologies
-  Support delivery of Local Area Energy Plans to enable a place-based approach to heat decarbonisation

SHORT - MEDIUM TERM (2025 – 2035): barriers to low carbon heat are overcome and low carbon heat sources are increasingly the de-facto choice for consumers and businesses, and the public sector are leaders in the transition.

-  Nurture local supply chains and capabilities as deployment grows
-  Support and encourage industry to decarbonise heat, including access to the UK ETS
-  Progress the phase out of fossil fuel boilers for domestic and commercial buildings
-  Support low carbon hydrogen innovation and development
-  Support Public Bodies to access funding and expertise to develop high-impact projects, sharing learnings with wider sectors
-  Use our evidence base and policy positions to influence UK Government policy on hydrogen for heating
-  Support social landlords to achieve EPC A through the 'Optimised Retrofit' programme and subsequent support
-  Facilitate the implementation of Local Area Energy Plans, working in collaboration with local delivery partners

MEDIUM - LONG TERM (2030 – 2050): low carbon heat is part of everyday lives in Wales - clean, affordable heat is available to all.

-  Share a clear consumer journey for all sectors on best-practice implementation of low carbon heat
-  Share best practice standards and supplier accreditations to give confidence to customers transitioning to low carbon heat
-  Champion businesses independently certifying their net zero commitments and performance

 COLLABORATION  LEADING THE WAY  SUPPORT  INFLUENCE  POLICYMAKING

Delivering the Action Plan

Delivering the Heat Strategy for Wales will require far-reaching activity across most policy areas in Government. Implementing the policies in the Heat Strategy will become part of core Welsh Government activity, it will be integrated into existing programmes and areas of responsibility with no specific delivery programme board or task and finish group established.

Wider stakeholders

The Welsh Government cannot deliver a successful implementation of the Heat Strategy for Wales on its own. We will work in partnership with the public sector, businesses, third-sector organisations, UK Government and citizens. Action is needed across the whole of society to help meet the vision of clean, affordability heat for all. We expect to work with and support delivery groups and external stakeholders across Wales.

Delivery Groups	Public Sector Strategic Groups / Organisations		Welsh Government Delivery Organisations & Programmes	Advisory Stakeholder Groups
	Well-being Future Generations Commissioner	Corporate Joint Committees	Ynni Cymru	National Infrastructure Commission for Wales
	Local Government Decarbonisation Strategy Panel	Regional Growth Deals	Business Wales	Audit Wales
	Health and Social Care Climate Change Board	Public Sector Organisations	Welsh Government Energy Service	Welsh Construction Forum
		Local Planning Authorities	Trydan Gwyrdd Cymru	Net Zero Industry Wales
	Welsh Local Government Association	Natural Resources Wales	Development Bank of Wales	Wales Rural Network
	One Voice Wales		Salix Finance	+ others
	Public Service Boards			

External	Consumers	Supply Chain, Skills, Standards & Third Sector		System scale enablers	Policy & Finance
	General public	Third Sector Bodies	Micro-generation Certification Scheme	National Grid – Energy System Operator	UK Government
	Businesses	Technology manufacturers	Trade bodies and accreditation providers	Renewable Generators	<ul style="list-style-type: none"> Department for Energy Security & Net Zero Department for Housing, Communities and Local Government
	Industry	Suppliers & distributors	Trade Associations	Distribution Network Operators (DNOs)	<ul style="list-style-type: none"> HM Treasury Heat Network Delivery Unit
	Press	Trades – heating engineers	UK Research & Innovation	Gas Network Operators	Ofgem
		Energy suppliers		Energy Suppliers	UK National Infrastructure Bank
		Colleges & Universities		Energy Networks Association	

Key Programmes

We are already making progress across key projects and programmes. The current landscape of the Welsh Government's relevant schemes, against the key themes of the Heat Strategy, are laid out as follows.

Project / Programme	Description	Enabling Framework	Energy Networks	Homes	Businesses	Industry	Public Sector
Future Energy Networks Wales	Project engaging with district network operators to plan future infrastructure.		✓				
Green Personal Learning Accounts	Funded training through colleges for low carbon trade skills.	✓					
Optimised Retrofit Programme	Social housing sector - decarbonisation and fuel poverty.	✓		✓			
Leasing Scheme Wales	Private rented sector - access to, and affordability of, renting privately in Wales.			✓			
Warm Homes Programme	Supports fuel-poor households, funding energy efficiency and provides advice.	✓		✓			
Welsh Government Energy Service	Support for public sector and community enterprise decarbonisation projects.	✓					✓
Business Wales	Free advice service for businesses in Wales.				✓	✓	
Development Bank of Wales	Loan schemes for businesses in Wales, including decarbonisation loans.				✓	✓	
Ynni Cymru	Programme to support smart, local energy systems.			✓	✓	✓	✓
Wales Funding Programme	Loan scheme for public sector decarbonisation projects.						✓
Public Sector Low Carbon Heat Grant	Grant scheme for low carbon heat projects operated by the Energy Service.						✓
Digarbon	Decarbonisation loan scheme with long term repayment options for tertiary education.						✓

Action Plan

Enabling framework

1. We will support the delivery of Local Area Energy Plans to enable a place-based approach for the low carbon heat transition – ensuring that this spatial approach identifies priority areas for low carbon heat and that this process is aligned with network planning by electricity distribution and transmission operators.

What are we doing now?

- We have funded the delivery of Local Area Energy Plans across all Local Authorities, supporting the coordinated decarbonisation of heat.

What do we plan to do in the near term?

- We will aggregate Local Area Energy Plan findings into a regional and national picture across Wales.
- Explore how spatial zoning can be used to accelerate and target investment in priority areas, as identified by Local Area Energy Plans.

2. We will facilitate the implementation of Local Area Energy Plans – by continuing to work with local authorities and regions to develop priorities and implementable projects and identify potential funding options.

What are we doing now?

- We have engaged with key delivery partners throughout the development of the Local Area Energy Plans.

What do we plan to do in the near term?

- Key data developed during the Local Area Energy Plans will be uploaded to DataMapWales, for use by other stakeholders.
- We will use the outputs of Local Area Energy Plans to inform our delivery programmes.

3. We will ensure the planning rules for permitted development rights for heat pumps are fit for purpose – we will review the evidence base and seek to remove any unnecessary planning constraints for the low carbon heat transition.

What are we doing now?

- Reviewing existing evidence around planning rules and heat pumps.
- Engaging with internal and external expert stakeholders.

What do we plan to do in the near term?

- We will prepare a consultation on permitted development rights, air source heat pumps will form part of this consultation.

4. In line with our Climate Action Wales Public Engagement Strategy, we will engage with households to improve their understanding of low carbon heat and our understanding of the challenges faced by households. We will continue to involve these households in decision making, and communicate the support available for their heat transition.

What are we doing now?

- Monitor the impact of the Climate Action Wales Public Engagement Strategy.

What do we plan to do in the near term?

- Ensure the advice available to all citizens through our Warm Homes Nest scheme is clear on the options around low carbon heating solutions and can support individuals to make informed decisions and to act.

5. We will build and share knowledge of the potential route to market for low carbon heat, technologies and processes. The aim is to create a clear understanding of options and support available for all sectors and customers, so that users can access existing supply chains and financing.

What are we doing now?

- Business Wales digital channels raise awareness of information to help businesses decarbonise and the support available from the Welsh Government and partners.
- Business Wales provides specialist decarbonisation advisers to support businesses to understand the actions they can take to review their practices and improve energy efficiency. The advice also includes signposting to investment and financing options.
- Welsh Government Energy Service supporting the public sector to decarbonise.

- The Nest scheme offers energy efficiency advice and, if eligible, support to install energy efficiency improvements in households across Wales.
- A range of Welsh Government programmes (for example Optimised Retrofit Programme) are supporting the development of local supply chains through local investment.

What do we plan to do in the near term?

- Launch our residential decarbonisation route map.
- Business Wales will develop digital information and tools to help businesses set and progress their decarbonisation goals.
- Using supply chain data mapping to understand the existing and potential supply chain in Wales, opening up opportunities for local manufacturers and service providers.

6. We will help to build trust between businesses and homeowners in existing and emerging low carbon heat suppliers by reviewing and sharing supply chain certification and standards – we will seek to share and communicate information on best practice standards and supplier accreditations to give confidence to customers transitioning to low carbon heat, e.g the TrustMark quality standard.

What are we doing now?

- Embed robust accreditation standards (e.g. MCS) is a requirement for Welsh Government programmes and funding.
- Sharing information on best practices and accreditation standards through our existing advice services.

What do we plan to do in the near term?

- Constantly review standards implemented and supply chains developed across our existing and new programmes to ensure we keep pace with best practice standards and other learnings.
- Continue to develop discussions with training providers and accreditation bodies.
- Utilise Business Wales digital channels and social media to amplify information with the business community.

7. We will continue championing the use of Publicly Available Specifications (PAS 2030, PAS 2035 and PAS 2038) in our programmes for low carbon heat – as applying recognised standards for energy efficiency will ensure consistency to our approach, this will be supported further by industry leading best practice.

What are we doing now?

- Mandating PAS2030 and/or PAS2035 across a range of Welsh Government programmes to ensure the highest standards of retrofit across buildings.

What do we plan to do in the near term?

- Constantly review the implementation of PAS across existing and new programmes to ensure we keep pace with best practice standards and other learnings.

8. Through the implementation of our Net Zero Skills Action Plan and development of the roadmaps we will identify the skills required to support low carbon heat solutions and seek opportunities to support retraining of gas engineers into renewable technologies.

What are we doing now?

- We've consulted and published the responses to our consultation on Net Zero Sector Skills and have produced draft sector skills roadmaps, detailing specific skills requirements, regulatory timelines and likely workforce demand by sector.
- We've made upskilling/re-skilling training in net zero skills free, for those currently in employment, through Green Personal Learning Accounts.
- For those over 20 years old and seeking to re-enter the labour market after redundancy our ReAct+ programme continues to provide grant support for vocational training, travel costs and care (including childcare) related to all forms of training, including net zero skills.
- We have also created a specific net zero skills element within our Flexible Skills Programme - to support employers to upskill their staff to meet future economic needs – on a co-funding basis.
- Our Jobs Growth Wales+ programme includes free training in areas such as construction and engineering skills, for those aged between 16-19 years old and not in education, employment or training.

What do we plan to do in the near term?

- We have a strongly funded apprenticeship offer for net zero skills and plan to incorporate new and revised qualifications as they are developed to meet the changing needs of the industry. For example, our Welsh Apprenticeship Pathway in Energy Management was issued in 2023.
- Working alongside stakeholders we will be finalising our sector skills roadmaps, including requirements for heat and energy.

9. We will continue to attract talent, from apprentices to professionals, into the low carbon heat sector – offering opportunities through our funded programmes, engaging our educational institutions to build skills for the sector, and utilising National Occupation Standards to create a detailed structure for skills.

What are we doing now?

- Implementation of social value through our schemes and contracts to support the development of skills in the sector.
- Specifying ongoing training and professional development within relevant contracts.

What do we plan to do in the near term?

- Continue to build on this by working with partners to ensure fair work.

10. We will aim to attract investment into industry and businesses in Wales through policy certainty and long term opportunities as part of the low carbon heat transition.

What are we doing now?

- Businesses can access a wide portfolio of loan and equity opportunities through the Development Bank of Wales and grants and support through the Welsh Government.
- Heat Strategy for Wales provides clarity to markets about the future policy trajectory for low carbon heat.

What do we plan to do in the near term?

- Continue to position Wales as a global leader in clean heat, sharing the scale of opportunities with investors and businesses.
- We will use appropriate Welsh Government business communication channels to amplify the approach, achievements and identified opportunities in low carbon heat transition in Wales to a UK and international audience.
- We will work with all interested businesses from outside of Wales that can bring new jobs to Wales and add value to the delivery infrastructure and ecosystem for low carbon heat.
- We will encourage Welsh supply chains and local businesses to improve productivity by connecting them with available support.

11. We will develop a better understanding of existing supply chains in Wales and identify opportunities to support them to grow as part of the low carbon heat transition.

What are we doing now?

- Using supply chain data mapping to understand the existing and potential supply chain in Wales, opening up opportunities for local manufacturers and service providers.
- The supplier finder service on Sell2Wales.gov.wales aims to help connect public and private sector businesses. Business Wales facilitates meet the buyer events to share pipeline opportunities for SMEs to access new business opportunities.

What do we plan to do in the near term?

- Share findings from the detailed supply chain data mapping and identify gaps and opportunities within the existing supply chain.
- Engagement across the supply chain to share findings and facilitate connections.
- Sharing data from the supply chain mapping with those procuring/specifying equipment so local suppliers can bid for opportunities.
- Explore how we can communicate more detail about what and how much will be bought so that businesses can make informed decisions regarding plans to develop the capability to fulfil these requirements.
- We will encourage Welsh supply chains to improve productivity by connecting them with available support.
- We will work with delivery partners to encourage the adoption of our Foundational Economy objectives so that the Heat Strategy helps improve household liveability; nurtures a financially sustainable supplier base which offers fair work opportunities; and supports environmentally sustainable systems of supply.

12. In developing and implementing our Just Transition to Net Zero Framework, we will identify financial and other forms of support needed for the Welsh workforce and for vulnerable households, including those in fuel poverty, to deliver a fairer transition to low carbon heat.

What are we doing now?

- We are supporting vulnerable households through our Warm Homes Nest scheme, funding advice and the installation of retrofit measures.
- We are supporting Local Authorities to leverage UK-wide funding and develop their offer to vulnerable households by implementing Local Authority ECO4 Flex schemes.
- Climate Action Wales shares case studies and resources for businesses and households.

What do we plan to do in the near term?

- Continue to ensure the Wellbeing of Future Generations assessment is embedded into our actions to ensure a just transition.

- We will work with delivery partners to encourage the adoption of our Foundational Economy objectives so that the Heat Strategy helps improve household liveability; nurture a financially sustainable supplier base which offers fair work opportunities; and supports environmentally sustainable systems of supply.

13. We will work with UK Government on the review of future electricity prices comparative to gas – currently, the taxation on electricity prices leaves a marginal cost case for heat pumps in many cases. We will continue to engage with the UK Government to move taxation and levies on electricity bills to support a just transition to a net zero Wales.

What are we doing now?

- We are engaging with UK Government to review taxation on electricity prices, enabling a transition to low carbon heat whilst supporting low income households.

What do we plan to do in the near term?

- We will continue to work with the UK Government to move taxation and levies on electricity bills to support a just transition to a net zero Wales.

14. We will continue to engage with DNOs to support adoption of smart solutions to reduce demand and increase flexibility.

What are we doing now?

- Addressing challenges faced by DNOs through engaging with and encouraging flexibility trials to overcome existing grid constraints (e.g. EQUINOX).

What do we plan to do in the near term?













- Continue to monitor the success of trials and implement lessons learnt.























Impact and Evaluation



















Well-being impact

The Well-being of Future Generations Act sets out 7 Well-being Goals for Wales. The act compels governments to consider future well-being in decision-making. Alignment of the Heat Strategy for Wales has been considered through its development.

With consideration to the Action Plan, the objectives of the Strategy have been mapped out against the 7 Well-being Goals to demonstrate the areas of benefit as follows.

Theme	Heat Strategy for Wales Objective	Prosperous	Resilient	Healthier	More Equal	Cohesive Communities	Culture & Welsh Language	Globally responsible
Enabling framework	a) Planning processes are transparent, streamlined, and fit for purpose - supporting the efficient rollout of low carbon heat solutions		•	•		•	•	•
Enabling framework	b) Low carbon heat is understood and supported by heat users in all sectors – collaboration and knowledge-sharing have driven demand-side momentum towards net zero heat		•			•		
Enabling framework	c) Our highly-skilled workforce supports local suppliers and manufacturers serving the transition in Wales – new talent, investment, and innovative solutions are drawn into Wales					•	•	•
Enabling framework	d) The costs of the transition are fairly distributed across society and benefits from this transition supports the economy and our communities	•	•	•		•	•	•

Theme	Heat Strategy for Wales Objective	Prosperous	Resilient	Healthier	More Equal	Cohesive Communities	Culture & Welsh Language	Globally responsible
Networks	e) Flexible and secure electricity networks have the infrastructure in place to effectively support electrified heat as part of a net zero energy system			•	•		•	•
Networks	f) Heat networks are a reliable and efficient provider of low carbon heat in suitable areas across Wales			•	•		•	•
Networks	g) Wales will support the utilisation of low carbon hydrogen where it enables a sustainable and just transition towards decarbonisation, for example, at localised hydrogen hubs where industries are dependent on high temperature processes, and for other hard to decarbonise solutions			•	•	•	•	
Domestic	h) A clear regulatory framework will be in place that supports net zero homes across all rented, owner-occupied, and social housing			•		•		•
Domestic	i) Homes are thermally-efficient and served in the main by heat pumps – a whole building approach has been taken to the transition and homeowners understand how to operate their systems					•	•	•
Domestic	j) Low carbon heat solutions will be affordable to install and affordable to operate		•			•	•	•
Business	k) Businesses in Wales will be sustainable and supported by affordable low carbon heat solutions			•	•	•	•	•

Theme	Heat Strategy for Wales Objective	Prosperous	Resilient	Healthier	More Equal	Cohesive Communities	Culture & Welsh Language	Globally responsible
Business	l) Businesses will have the confidence to invest in the transition to low carbon heat and net zero buildings			•		•	•	
Business	m) Our businesses and commercial properties will demonstrate their net zero credentials, building confidence and engagement with consumers		•	•			•	•
Industry	n) Industry is transitioned, competitive, and sustainable for the long term following implementation of best available techniques for energy efficiency and low carbon heat			•	•	•	•	
Industry	o) Low carbon hydrogen hubs are established and serving high-temperature industrial processes and local users where appropriate			•	•		•	•
Public services	p) The public sector are leaders in the transition to net zero – working towards net zero by 2030 and supporting delivery on a regional and local basis to recognise the benefit to Wales			•		•	•	•
Public services	q) All public sector buildings will be served by low carbon heat solutions – championing a whole building approach to the transition			•	•	•	•	•

Further to the areas of benefit across the Well-being Goals, the delivery of the Heat strategy for Wales will also support the following National Indicators that measure progress against our Well-being Goals:

- Percentage of people in education, employment or training, measured for different age groups
- Percentage of dwellings with adequate energy performance
- Capacity (in MW) of renewable energy equipment installed
- Percentage of people living in households in material deprivation
- Percentage of people in employment
- Emissions of greenhouse gases within Wales
- Percentage of households spending 30% or more of their income on housing costs

Monitoring and Evaluation Framework

Progress of the Heat Strategy for Wales will be monitored in two ways:

- Progress against the Action Plan - qualitative
- Rollout of low carbon heat and emissions - quantitative

It has been agreed that overall responsibility for monitoring progress will fall with: *Cabinet Secretary for Economy, Energy and Welsh Language*.

Progress against the Action Plan

The qualitative assessment of progress will consider the following mechanisms:

- Heat Strategy for Wales Action Plan reviews aligned with the carbon budget timescales
- Programme for Government – progress reviews
- Carbon Budget – Net Zero Wales - progress reviews
- LAEP progress reviews
- Public sector progress reported through the programme boards for decarbonisation

Rollout of low carbon heat and emissions

The quantitative assessment of progress will consider the following mechanisms:

Monitoring mechanism	Description	Strategy themes covered
Energy Use in Wales reporting	Bi-annual reporting covering energy, inputs and use, across Wales. <ul style="list-style-type: none"> Fossil fuel and renewable heat use are quantified and analysed by drawing on DESNZ sub-national datasets. The report sets out Wales-wide heat use and local authority area energy use, identifying trends. 	Overall
Energy Generation in Wales reporting	Yearly reporting covering energy, inputs and use, across Wales. <ul style="list-style-type: none"> For low carbon heat – MCS, RHI and EPC data is used to understand the number of installations, installed capacity, and heat produced from each form of low carbon heat. This allows reporting of trends in low carbon heat deployment across Wales and for each local authority area. This data is limited to 2 years of previous reporting. 	Homes, Businesses
Welsh Public Sector Net Zero Reporting	Shows fossil fuel heat use, MW and MWh of low carbon heat capacity installed.	Public Sector
Carbon Budget Emissions Progress Reviews	Overall fossil fuel emissions for heat in Wales.	Overall

Key Next Steps

The Heat Strategy for Wales, and this Action Plan, will impact all of society in Wales. The scale of change needed is transformative, and it will need to happen over the long term. This Action Plan must seek to make progress against the Strategy as a whole, whilst ensuring that the breadth of action is deliverable with the resources available.

The focus of the Action Plan is on the short term – an enabling environment is created, creating the conditions for the transition to happen at speed and scale – and many actions will not achieve direct carbon reductions, but will unblock key barriers to deployment that will subsequently lead to emission reductions. There will also be work across Welsh Government Departments to further policies and actions developed during the Heat Strategy.

This Action Plan focuses on creating the enabling environment required for the transition, the following key steps will be crucial to achieving the ambitions outlined in the Heat Strategy:

Improving the financial case for low-carbon heating systems

Low-carbon heating systems must be financially competitive with fossil fuel alternatives to reach the majority of consumers and for our businesses and industry to remain competitive.

Ensuring a heating system is installed and operates in an optimised (and therefore cheaper) way starts with skilled and competent workers, including surveyors, designers, and installers. We must engage early and support our educational facilities to design and deliver this training to deliver a workforce that will a) have the capacity to deliver the scale we need, and b) have the competence to install efficient heating systems that deliver fuel savings relative to fossil fuel alternatives.

Decreasing the difference between natural gas and electricity pricing (the ‘spark gap’) will make electrical heating systems more competitive with natural gas boilers. Whilst it is a key driver, we must do this in a way that does not disadvantage those remaining on natural gas, particularly vulnerable groups that may not have the financial means to transition.

We need to deliver financing and support packages that are attractive to everyone and accommodate different financial situations and preferences.

Increasing public understanding and trust

There is currently a lack of public understanding and/or trust in many of the technologies put forward in the Heat Strategy. When owner-occupiers were asked if they were likely to install specific low-carbon heating systems next time they need to change, the following percentage of respondents answered “unlikely”: 40% (air source heat pumps); 45% (ground source heat pumps); 40% (hybrid heat pumps) and 48% (biomass boilers)¹. The transition will require informed and consenting individuals to drive demand-side momentum, and we have a part to play in that:

- Providing information that is relatable and accessible to people across Wales will help to build confidence in the low-carbon heating technologies supported by our Heat Strategy.
- Ensuring that existing supply chain certification and standards are fit for purpose and offer the intended consumer protections.

Remove planning and regulatory barriers

We must ensure that planning policy and regulation are proportionate, appropriate, and informed by a strong evidence base. We must challenge assumptions and remove unnecessary regulatory burdens, whilst ensuring people remain protected.

Ensure the foundations of the transition are just

Targeting speed and scale must not be at the detriment of vulnerable people and communities. From the outset, we must ensure we have guardrails that support those who are most exposed to the impacts of our transition. Accelerating progress and support for those living in fuel poverty will allow us to confidently progress in other policy areas, for example, energy price market reform.

¹ [DESNZ Public Attitudes Tracker Winter 2023 Heat and Energy in the Home \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1154442/DESNZ_Public_Atitudes_Tracker_Winter_2023_Heat_and_Energy_in_the_Home.pdf)

Register of all Policies

For reference, below is a list of all the policies within the Heat Strategy.

Enabling framework

a) Planning processes are transparent, streamlined, and fit for purpose - supporting the efficient rollout of low carbon heat solutions

1. **We will support the delivery of Local Area Energy Plans to enable a place-based approach for the low carbon heat transition** – ensuring that this spatial approach identifies priority areas for low carbon heat and that this process is aligned with network planning by electricity distribution and transmission operators.
2. **We will facilitate the implementation of Local Area Energy Plans** – by continuing to work with local authorities and regions to develop priorities and implementable projects and identify potential funding options.
3. **We will ensure the planning rules for permitted development rights for heat pumps are fit for purpose** – we will review the evidence base and seek to remove any unnecessary planning constraints for the low carbon heat transition.

b) Low carbon heat is understood and supported by heat users in all sectors – collaboration and knowledge sharing have driven demand-side momentum towards net zero heat

4. **In line with our Climate Action Wales Public Engagement Strategy, we will engage with households to improve their understanding of low carbon heat and our understanding of the challenges faced by households.** We will continue to involve these households in decision making, and communicate the support available for their heat transition.
5. **We will build and share knowledge of the potential route to market for low carbon heat, technologies and processes.** The aim is to create a clear understanding of options and support available for all sectors and customers, so that users can access existing supply chains and financing.
6. **We will help to build trust between businesses and homeowners in existing and emerging low carbon heat suppliers by reviewing and sharing supply chain certification and standards** – we will seek to share and communicate information on best practice standards and supplier accreditations to give confidence to customers transitioning to low carbon heat, e.g. the TrustMark quality standard.

7. **We will continue championing the use of Publicly Available Specifications (PAS 2030, PAS 2035 and PAS 2038) in our programmes for low carbon heat** – as applying recognised standards for energy efficiency will ensure consistency to our approach, this will be supported further by industry leading best practice.

c) Our highly-skilled workforce supports local suppliers and manufacturers serving the transition in Wales – new talent, investment, and innovative solutions are drawn into Wales

8. **Through the implementation of our Net Zero Skills Action Plan and development of the roadmaps we will identify the skills required to support low carbon heat solutions** and seek opportunities to support retraining of gas engineers into renewable technologies.
9. **We will continue to attract talent, from apprentices to professionals, into the low carbon heat sector** – offering opportunities through our funded programmes, engaging our educational institutions to build skills for the sector, and utilising National Occupation Standards to create a detailed structure for skills.
10. **We will aim to attract investment into industry and businesses in Wales through policy certainty and long term opportunities as part of the low carbon heat transition.**
11. **We will develop a better understanding of existing supply chains in Wales and identify opportunities to support them to grow as part of the low carbon heat transition.**

d) The costs of the transition are fairly distributed across society and benefits from this transition support the economy and our communities

12. **In developing and implementing our Just Transition to Net Zero Framework, we will identify financial and other forms of support needed for the Welsh workforce and for vulnerable households, including those in fuel poverty, to deliver a fairer transition to low carbon heat.**
13. **We will work with UK Government on the review of future electricity prices comparative to gas** – currently, the taxation on electricity prices leaves a marginal cost case for heat pumps in many cases. We will continue to engage with the UK Government to move taxation and levies on electricity bills to support a just transition to a net zero Wales.
14. **We will continue to engage with DNOs to support adoption of smart solutions to reduce demand and increase flexibility.**

Energy networks and infrastructure

e) Flexible and secure electricity networks have the infrastructure in place to effectively support electrified heat as part of a net zero energy system

15. **We will continue to develop evidence to support others responsible for designing and delivering the future grid capacity needed to meet our ambitions for low carbon heat.** Continuing the work of Future Energy Grids for Wales, our national coverage of local area energy plans and our ongoing Welsh Grids Forum.
16. **We will work with stakeholders across Wales to build the detailed requirements for our future grid** and explore smart and flexible approaches that reduce the extent of infrastructure investment needed.
17. **We will continue to work closely with the Distribution Network Operators on aligning Local Area Energy Plans with their approach to planning grid upgrades.**
18. **We will work with the networks on the evolving Regional Energy Strategic Planner function to align network plans with local ambitions.**

f) Heat networks are a reliable and efficient provider of low carbon heat in suitable areas across Wales

19. **We will use the evidence from the Local Area Energy Plans to identify the opportunities for zonal planning in Wales.** After reviewing those opportunities we will assess whether the zoning powers in the Energy Act 2023 are required in Wales.
20. **We will support the scale-up of viable low carbon heat networks** – we will support access to funding and expertise to develop new low carbon district and communal heat networks, and transition existing heat networks to low carbon heat. We will continue to engage UK Government on heat network support and regulations.

g) Wales will support the utilisation of low carbon hydrogen where it enables a sustainable and just transition towards decarbonisation, for example, at localised hydrogen hubs where industries are dependent on high-temperature processes, and for other hard to decarbonise solutions

21. **We will publish a preferred hydrogen policy position for Wales and we will work with UK Government to ensure the Low Carbon Hydrogen Standard fully reflects our statutory decarbonisation commitments.**

- 22. **We will use our evidence base and policy positions to influence UK Government policy on hydrogen** – ensuring that the approach adopted, for instance regarding the hydrogen levy and hydrogen-ready boiler mandate, supports our plan for a just transition to low carbon heat in Wales.
- 23. **We will continue to develop our hydrogen evidence base** to better understand energy demands across Wales, and the potential role of hydrogen to support a just and sustainable decarbonisation and engage with communities and stakeholders to maximise the benefit of local opportunities.

Homes

h) A clear regulatory framework will be in place that supports net zero homes across all rented, owner-occupied, and social housing

- 24. **We will review and consider options, both within our devolved powers and working with UK Government, to introduce planning policy that restricts fossil fuel heating in new developments with the aim of introducing a ban** – we'll explore other mechanisms such as through building regulations to assist in this goal as required.
- 25. **We will develop options within our devolved powers and work with UK Government to accelerate phasing out fossil fuel boilers in existing dwellings at the point of replacement, that is just and sustainable solution to decarbonisation.**
- 26. **We will investigate options for the use of energy performance standards at the point of sale and letting as a mechanism to drive low carbon heat uptake.**
- 27. **We will continue to drive standards through our Welsh Development Quality Requirements and Welsh Housing Quality Standard where all new social housing must achieve EPC A or an equivalent standard, and existing social housing must have a Target Energy Pathway in place to achieve EPC A by 2034 or by a date after 2034 that Welsh Government has authorised.**

i) Homes are thermally-efficient and served in the main by heat pumps – a whole building approach has been taken to the transition and homeowners understand how to operate their systems

- 28. **We will provide homeowners with advice and support for the transition to low carbon heat.**
- 29. **We will continue to prioritise low carbon heat as part of the latest iteration of the Warm Homes Programme, which supports households in fuel poverty in owner-occupied and private rented homes.**
- 30. **We will support social landlords - delivering our 'Optimised RetroFit' programme in the short term and exploring the longer term options to help social landlords achieve EPC A.**

- 31. **We will share best practice to demonstrate how historic and traditionally constructed buildings can effectively decarbonise heat.**
- 32. **We will support the smart meter roll-out as part of our programmes and in our advice** – this will futureproof our homes for variable tariff and demand management opportunities.
- 33. **We will explore how to transition to low carbon heat for the owner-occupied and private rented sectors** – we will assess pathways and support options, taking the learnings from existing programmes and wider best practice, involving householders in this process.

j) Low carbon heat solutions will be affordable to install and affordable to operate

- 34. **We will work in conjunction with stakeholders to address financial barriers for low carbon heat solutions across the domestic sector** – we will take a consolidated view across all support programmes, and the future needs of homeowners to implement low carbon heat.
- 35. **We will work with the Development Bank of Wales to champion a whole house approach to low carbon heat solutions in its housing development finance offers.**
- 36. **We will work with the UK Government and energy suppliers to understand how variable tariff offers can be utilised better for homeowners.**
- 37. **We will consider options for further funding for social landlords to meet EPC A across all homes.**

Businesses

k) Businesses in Wales will be sustainable and supported by affordable low carbon heat solutions

- 38. **We will prepare a regulatory route map to understand fully the legislative barriers and implications of phasing out of the installation of all new gas boilers for commercial properties by 2033** – aligning with the Climate Change Committee recommendation that the sale of gas boilers to businesses will be phased out by 2033.
- 39. **We will explore how we can facilitate the phase-out of off-gas grid fossil fuel boilers for commercial properties** – off-gas grid properties have the greatest carbon impact and prioritising these will have the greatest impact; we will support within our devolved powers and work with UK government.
- 40. **We will provide non-domestic rates support for the installation of low carbon heat networks and the use of on-site renewable energy technologies to assist the cost effectiveness of businesses transitioning to low carbon heat.**

l) Businesses will have the confidence to invest in the transition to low carbon heat and net zero buildings

- 41. We will work with partners to share best practices and build confidence in the role of low carbon heat for sustainable business in Wales.**
- 42. We aim to continue support for low carbon heat through the Development Bank of Wales building on the learnings from the Green Business Loan Scheme.**
- 43. We will continue to support businesses in Wales through Business Wales**– we will ensure that the support provided includes advice on the approach for low carbon heat and the opportunity of the net zero transition.

m) Our businesses and commercial properties will demonstrate their net zero credentials, building confidence and engagement with consumers

- 44. We will review the use of building performance certificates, as part of the regulatory route map to understand their role in minimum energy efficiency standards for renting, and how improvements can be made to champion net zero assurance.**
- 45. We will champion our businesses independently certifying their net zero commitments and performance, demonstrating progress to net zero** – we will continue to deliver our Green Growth Pledge through Business Wales and explore the options to support a net zero charter for businesses to build commitments, further, standards such as Science Based Target Initiative certification will be shared with businesses to help demonstrate net zero alignment.

Industry

n) Industry is transitioned to affordable low carbon heat, competitive, and sustainable for the long-term following implementation of best available techniques

- 46. We will support industry to access available funding and other support options to enable its transition to affordable low carbon heat** - we will continue to work with industrial stakeholders to maximise the opportunities to leverage funding from UK Government funding streams.
- 47. We will continue to work with industrial stakeholders on decarbonisation pathways for key industrial heat applications** – we will work in collaboration with industry, the industrial clusters, academia and other stakeholders to develop opportunities for energy efficiency projects, utilisation of waste heat, creation of clean growth hubs and other innovative approaches. Working with stakeholders we will disseminate best practice and facilitate and incentivise data sharing, learning and collaboration.

o) Low carbon hydrogen hubs are established and serving high-temperature industrial processes and local users where appropriate

- 48. We will continue to support hydrogen innovation, and develop the understanding of industrial heat demand across Wales –** supporting innovation will ensure Wales can recognise the benefit from the opportunity for a green economy.
- 49. We will engage our energy network operators on the plan for hydrogen in industrial areas, the infrastructure needed, and the opportunities for renewable electricity generation.**

Public services

p) The public sector are leaders in the transition to net zero – working towards net zero by 2030 and supporting delivery on a regional and local basis to recognise the benefit to Wales

- 50. We will utilise Net Zero Reporting to track public sector building performance –** this will demonstrate and give assurance that the public sector is leading the way to net zero heat.
- 51. We will communicate success and share learnings across public bodies and to wider sectors –** as we work towards our ambition of a net zero public sector by 2030 we will share learnings and case studies need to be shared to build wider momentum for the low carbon heat transition.
- 52. Our public sector will collaboratively drive decarbonisation regionally and locally through Regional and Local Area Energy Planning –** public bodies will be central to driving change in Wales.
- 53. We will seek to build local supply chains, grow skills and realise social value through the public sector transition to low carbon heat –** leveraging our ability to affect sustained change to achieve social, economic, environmental and cultural outcomes for the well-being of Wales.

q) All public sector buildings will be served by low carbon heat solutions – championing a whole building approach to the transition

- 54. We will support public bodies by facilitating access to funding to deliver high carbon impact but financially challenging low carbon heat projects –** including the new low carbon heat funding scheme to scale-up the transition and support the low carbon option to become business-as-usual.

- 55. **We will review funding options to support a net zero public sector by 2030 and a whole building approach to low carbon heat** – we will review the use of Welsh Government loan and grant funding to maximise benefits and seek to leverage further finance to help scale-up the delivery of low carbon heat.
- 56. **We will work with public sector partners to explore practical solutions for public procurement to build market capacity** – providing a route to market for public sector delivery and building the opportunity for local supply chains.
- 57. **We will build capacity to deliver a whole building approach to low carbon heat deployment** – our Welsh Government Energy Service will support the public sector with strategic, technical and commercial advice to drive activity.