



WELSH LOCAL GOVERNMENT DECARBONISATION PLANNING: REVIEW

SEPTEMBER 2021



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Commissioned by Welsh Local Government Association



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Glossary

It is important at the outset of this report to explore the terminology around decarbonisation, energy management, emissions reduction and mitigation which may often be used interchangeably. This is not an issue of semantics, as distinctions are critical to understanding the scale and nature of a local authority's activity on decarbonisation.

Climate Mitigation - activity to reduce, prevent and limit the rate of emissions which contribute to climate change². This can be done through minimising emissions, sequestering carbon in the natural environment or storing carbon in below ground biomass and soils³. At a local authority level, mitigation activity can be delivered, initiated and supported by local government's roles as; a service provider; as a place shaper; provider of infrastructure; shaper of societal behaviour; influencer of partners and government.

Decarbonisation - activity which removes or extracts carbon from energy sources used, thereby reducing CO₂ emissions. This helps with climate mitigation, and therefore minimises a local authority's contribution to the problem via less carbon intensive use of energy. Our research explores the nature of activity planned in each organisation.

Energy management - activity which generally enables organisations to improve energy efficiency, cut costs and reduce CO₂ emissions, often by introducing renewable energy technology in place of fossil fuel alternatives. This helps organisations which use energy to minimise their contribution to carbon emissions and therefore helps climate mitigation. Many local authorities have a long-established approach to this issue.

Climate Emergency – there is no single agreed definition, as each declaration is often suited to local circumstances, but OED describes it as “a situation in which, urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.” The declarations made by local authorities so far provide similar commentary on the urgency and scale of the challenge.

Scope 1, 2 and 3 Greenhouse Gas Emissions - categories emissions that help organisations to develop a baseline and improve upon this. Scope 1 are directly 'owned' by a local authority; Scope 2 are as a result of the generation of purchased energy by a third party and consumed by the reporting organisation; and Scope 3 are indirect emissions (not included in Scope 2) that occur in the value chain of the reporting organisations, including both upstream and downstream emissions. A diagram in Appendix A shows this in more detail.

² This includes CO₂, Methane, Nitrous Oxide and Fluorinated Gases. Greenhouse Gas Emissions (GHGs) ² in Wales are made up from businesses (21%), transport (15%), energy supply (14.3%), agriculture (12%), residential (8.7) , Industrial processes (1.9%), waste (2.9%), and the public sector (0.7%).

³ Carbon sequestration is the long-term removal, capture, or sequestration of carbon dioxide from the atmosphere to slow or reverse atmospheric CO₂ pollution and to mitigate or reverse climate change.

1. Executive Summary

The WLGA commissioned this review on the current state of Decarbonisation Planning in Welsh Local Government as part of their Transition and Recovery Support Programme (TaRSP) to provide intelligence to those working in this area of policy; to identify and share practice; and ways to support officers and members working in this area.

The research is intended to inform local governments approach to progressing towards the Net Zero Carbon 2030 target for the public sector, and the Net Zero Carbon 2050 target for Wales.

The research has been designed to inform the work of decarbonisation practitioners, senior managers, lead members and key staff within local authorities that need to be engaged in the decarbonisation agenda. The work will also inform the national level work of the Wales Local Government Decarbonisation Strategy Panel.

The research focuses on the following aspects of progress in Decarbonisation Planning, production, delivery, scope and ambition, governance, the nature of interventions in the plans, measurement of baseline greenhouse gas emissions, and support needs.

The research used documentary evidence and the views of expert local authority practitioners to inform the findings. All 22 authorities were engaged in the research with over 50 individuals engaged in individual, group and workshop discussions from July-September 2021. The evidence gathered suggests the following:

On scope and ambition: there is a wide range of depth, sophistication, and practice in Decarbonisation Planning within local authorities in Wales, ranging from narrowly focused plans focusing on emissions reduction through targeted operational activity; to plans which are adopting a corporate approach to organisational decarbonisation across Council services; to a small number which in addition to the Council's carbon footprint, seek to address territorial emissions. Many local authority practitioners suggested that there was a missed opportunity for greater local authority focus on territorial emissions alongside organisational emissions in their Plans.

On governance: there is evidence in many Councils of a shift occurring towards establishing corporate decarbonisation boards and programmes to work across all services, with investment in staff and resources. Many Councils have newly established senior, executive and political leadership on this issue. There remain some Councils that are approaching decarbonisation through a more traditional operational and efficiency focus.

On interventions, progress and practice: the research found that authorities' Plans and actions on emissions reduction focus on work they are already doing, and intend to do, on buildings and transport. Plans provide minimal evidence of actions regarding procurement and the role of land-use. These are two of the major areas where actions for emissions reduction are needed to meet both the 2030 and 2050 targets. Forty-four case studies were identified by practitioners with many

demonstrating how carbon emissions reduction is now a key part of strategic, organisational, operational, and community-based activity. These examples provide strong evidence of action on buildings and transport, but also indicate the need to develop evidence and practice on procurement and land use.

On measurement of Greenhouse Gas Emissions Baselines: the research found that much progress has been made on measuring Scope 1 and Scope 2 emissions drawing on previous and current work. Measurement of Scope 3 emissions is problematic and will require a coordinated effort at national, regional and local levels, particularly on calculating emissions from procurement; and the role land plays in sequestering and storing carbon in Council assets and across the authority area.

On support needs: a sophisticated and complex set of needs emerged from the research including strategic needs at national and local levels; organisational needs to ensure decarbonisation becomes mainstreamed in decision making and service delivery; operational needs to develop and implement decarbonisation projects; and evidence needs to support GHG baseline measurement.

The research offers **recommendations on WLGA support** and how this could help local authorities to develop their practice and work together on decarbonisation to address these needs. This includes recommendations on peer-to-peer learning; national on-line workshops and online learning sessions; bespoke individual authority support and officer and member training; policy advice and regional integration workshops; case study development and dissemination; and establishing a Wales-wide climate change policy forum /officer group to support the work of the Decarbonisation Strategy Panel and WLGA member organisations.

A **Decarbonisation Dimensions Model** has been developed as part of this commission to support local authorities to explore their approaches to different dimensions of decarbonisation activity⁴. With further development this could help local authorities to explore their current levels of practice within these dimensions; how they wish to develop these in the future; self-assess within the organisation and identify ways to improve their approach in each dimension; peer review each-others' approach to decarbonisation; and map current activity within the local authority area and region.

The research suggest that the **Wales Local Government Decarbonisation Strategy Panel** could support local authority's work through specific actions including: stakeholder mapping to identify how existing initiatives and resources can be streamlined and aligned to maximise strategic purpose for both the public sector target for Net Zero 2030 and the national Net Zero 2050 target; developing guidance on approaches to addressing emissions reduction at a territorial scale and taking the lead in providing advice on issues such as grid development, technical guidance to inform investment; zero carbon investment; and skills development for decarbonisation.

The following points need to be emphasised. Many local authorities are still in the process developing and redeveloping their approaches to decarbonisation, and the

⁴ Compliance; Operational; Organisational ; Corporate; Project; Partnership; Place; Territorial ; Strategic

research attempted to capture the state of progress and the process of change, at a moment in time. The research is not an audit of local authority activity on decarbonisation; nor is it an evaluation of local authority response to either the Net Zero Carbon 2030 reporting guidelines; or the Welsh public sector route map; although these are important parts of the context local government activity in this area of work.⁵

What this work does represent is a thorough and detailed review of documentary evidence and expert opinion from Councils on the state of current practice on decarbonisation planning in Welsh Local Government. As such, this is an important piece of evidence for local authorities, WLGA, Decarbonisation Strategy Panel and Welsh Government as they plan forward to both 2030 and 2050.

⁵ Please note that this research does not provide analysis of Climate Adaptation – activity which helps to minimise risks from climate change impacts such as: unpredictable severe weather; sea level rise; damage to natural systems; with consequential impacts on infrastructure, the regional economy, natural environment, communities and people’s well-being. Climate resilience is the extent to which a community, organisation or region can deal with the risks from climate change risks and be prepared for the future. Analysis of local authority work in this area would need a separate piece of research.

2. Background

2.1 In June 2021, Welsh Local Government Association commissioned Miller Research (MR) and Netherwood Sustainable Futures (NSF) to undertake research on local government approaches to decarbonisation planning in Wales. The objectives of this research were to develop an understanding of the state and quality of decarbonisation planning across the 22 local authorities in Wales, including:

- progress in the production and delivery of decarbonisation plans
- progress in embedding decarbonisation into decision making including changes to the organisational structure
- the scope and ambition of decarbonisation work including the key areas of transport; buildings; land use; procurement and communications
- the nature and scale of co-production and regional work
- methodological issues in measuring greenhouse gas emissions (GHG) baseline data
- local, regional and national support needs to progress decarbonisation plan delivery

2.2 The WLGA commissioned this research as part of their Transition and Recovery Support Programme (TaRSP) for local government⁶ to provide intelligence to those working on decarbonisation planning, including sharing of emerging practice; identifying ways to support officers and members working in this space; and to inform the work of Wales Local Government Decarbonisation Strategy Panel⁷. The intention is for this research to provide information to WLGA as part of their contribution to COP26 climate change summit in Glasgow in November 2021.

2.3 This research recognises that there are multiple drivers for decarbonisation in Welsh local government; including political commitments to address the climate emergency; long-established work to reduce organisational carbon emissions; a wide variety of community-based projects and activity to reduce emissions in local communities; and multiple partnerships delivering decarbonisation through programmes and projects across the local authority ‘territories.’

2.4 Recent developments from Welsh Government have provided context for decarbonisation work in local authorities. Firstly, the need to establish and report on a baseline of GHGs in response to the *Welsh Public Sector Net Zero Carbon Reporting Guide* from Welsh Government (May 2021). This guide seeks to support local government to report on its progress towards carbon neutrality – and action on these forms a key component of WGs approach set out in its national strategy: *Prosperity for All: A Low Carbon Wales*(2019).

2.5 The Welsh Government *Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector (2021)* provides a strategic

⁶ This WLGA programme aims to support decarbonisation, climate change adaptation and resilience, EU Exit, Covid-19, Green Recovery work in local government and is funded through Welsh Government.

⁷ <https://www.wlga.wales/local-government-decarbonisation-strategy-panel->

overview of the key priority areas for action and milestones needed for the Welsh public sector to reach net zero greenhouse gas emissions by 2030. This includes steps: moving up a gear; well on our way; achieving our goal; and sets of conditions in four key areas of practice; buildings; mobility and transport; land-use and buildings

2.6 The challenge for this research was to capture progress across multiple levels of activity, and planning at different levels of maturity and complexity.⁸ The research team worked closely with WLGA to establish a set of key themes to gather consistent data across the authorities, wherever they were in the process of plan development.⁹

2.7 It is important to note that this research provides an overview of the current state of play of decarbonisation planning across the 22 local authorities from a broad perspective. It is not an evaluation or assessment of local authorities' approach to responding to the reporting guidelines described in 1.4, nor is it an assessment of where local government is on the route-map described in 1.5. These are important parts of the context of a much broader activity underway in Welsh local authorities on decarbonisation.

2.8 The research was undertaken July – September 2021 using the following approaches:

- desk- based analysis of plans, progress reports, internal reports, web-based material from the 22 local authorities (see Appendix for full list)
- 22 one to one discussions¹⁰ with decarbonisation leads and their colleagues from the local authorities – engaging 43 people in total
- a national workshop on decarbonisation planning on 8th September 2021 involving an e-survey self-assessment and exercises on case studies and needs. A total of 51 participants engaged in the workshop.

2.9 The research team were able to engage with all 22 authorities throughout the commission and are extremely grateful for the interest and support provided from those working on decarbonisation in local authorities. Additional correspondence, updates and documentary evidence were invaluable, to build up a picture of practice, and to inform the recommendations in this report.

2.10 It needs to be emphasised that the one-to-one discussions were with decarbonisation leads and their colleagues 'at the cliff face' of delivering and mainstreaming work towards Net Zero. Their views were sought as experts in their field, and as such represented the best way to gather detailed information

⁸ N.B at the time of the research of the 22 authorities plans, 8 were still under development, and of the remaining 14 plans, 3 were being refreshed as the research was undertaken.

⁹ Data gathering themes:

- | | |
|--|---|
| • the scope and ambitions of plans | • progress in implementing plans |
| • the nature of the interventions in the plans | • partnership work on decarbonisation |
| • approaches to governance of decarbonisation | • gaps and concerns in relation to delivery |
| • measurement of the GHG baseline | • emerging practice |
| | • support needs |

¹⁰ Please note that the responses from individuals have been anonymised to encourage an open dialogue.

on progress and understand their views on operational, organisational, and strategic activity, within the timescale available. Further work would be valuable to gather the views of members and senior officials who may have had additional insights on progress and priorities.

2.11 This report is structured around the following themes: scope and ambition of decarbonisation planning, governance of decarbonisation, decarbonisation interventions and progress, measurement of greenhouse gas emission baselines, support needs to develop practice in Welsh Local Government. Each provide an overview of the data collected, the research team's analysis of the data and key issues emerging under each theme. These key issues are then used to provide a series of recommendations for progress in Section 9 of this report.

2.12 It is important to note that this commission has been undertaken by an independent team who have a wide range of experience in research at national, regional, and local levels across Wales. The team have used this experience to understand different people's views, insights and learning on decarbonisation planning, to review the documentary evidence, and explore through one to ones, the complex and inter-connected political, strategic, organisational, operational, and technical aspects of this aspect of local government work– to support future practice on this issue.

3. Scope and Ambition of Decarbonisation Planning

3.1 A key aim of the research was to understand the scope of decarbonisation planning, and the relative balance between operational, organisational and strategic activity that they aimed to progress. The documentary evidence and discussions enabled us to develop an understanding of this across the 22 authorities.

3.2 One of our key findings is that local government approaches to decarbonisation have a **wide range of depth and sophistication**, illustrated by the following observations:

- baseline measurements dominate some plans and plans do not, in many cases, reflect the breadth of contributory decarbonisation activity by the Council; the baseline and emissions report are only a small part of decarbonisation planning for some – but the main focus for others.
- most plans are strong on decarbonisation of ‘operational activity’ of local government as a service provider, manager of estate, procurer of goods and services.
- many plans include references to existing projects, initiatives which contribute to decarbonisation in the community, highlighting the Council’s positive performance on this agenda.
- there is significantly less evidence of activity planned on ‘territorial decarbonisation’ through local government’s role as a place shaper; provider of infrastructure; shaper of societal behaviour; influencer of partners and Government.

3.3 At the time of writing, 17 of the 22 local authorities in Wales had declared climate emergencies. The evidence we have gathered suggests that these declarations are driving change within local authorities, encouraging services to embed decarbonisation across all areas of their work – not just in areas of baseline measurement.

3.4 We suggest, on the basis of our research, that Decarbonisation Plans in Wales fit into the following **broad categories**:

- a number of authorities have Plans which have a narrow focus on a limited number of operational actions on emissions reduction with targets in areas of traditional practice and influence, related to organisational emissions: particularly around energy efficiency in buildings, fleet and street lighting
- many authorities have broader strategies with between 20-50+ interventions for operational activity, organisational change, and work in partnerships – these Plans are focused on Council emissions, not territorial emissions, with some communications and engagement work with communities.
- small numbers provide a strategic and costed business case for organisation - wide decarbonisation programme with associated actions, with clear signs of executive leadership and integration with business and financial planning.
- a small number also focus on some territorial level activity including strategic pathways to decarbonisation with scenarios and action planning to 2030 and beyond.

3.5 This variety and scope and breadth of decarbonisation planning shows that Councils are in very different places in their complexity and maturity of approach. Their progress towards Net Zero by 2030 is multi-faceted, based on a wide variety of operational, organisational, strategic, and community-based activity. Some Councils are looking beyond Net Zero 2030 and are proactively considering their role in achieving the national Net Zero 2050 target.

3.6 The evidence suggests that there is a **shift towards organisation-wide corporate programmes** for decarbonisation in many Councils. Many have established these in the last 12 months and others are in the process of establishing them. Our findings suggest that:

- political and senior leadership are central to this shift in many Councils, as a response to climate emergency declarations from 2019 onwards.
- in most cases, these programmes are focused on operational and organisational activity of the Council – less so on strategic approaches to decarbonisation with other partners, or territory-wide activity.
- while many are unclear about how their plans and programmes will be delivered and progress monitored, some exhibit strong links to financial and business planning and performance management to support delivery.

3.7 We suggest that many Council officers have strong motivation to **develop territory-wide approaches to decarbonisation**, in order to work towards NetZero for the local authority area. The following points illustrate this:

- some felt that the reporting guidance had contributed to a lack of ambition in decarbonisation planning to focus primarily on emissions reduction and focus on operational reporting and measurement. This had consequently, due to limited staff-time, inhibited external collaboration and prevented some of the wider influencing and strategic opportunities they could develop
- many Councils want to extend activity into the ‘territorial’ space to achieve decarbonisation but felt that there were tensions between: what was being asked in the reporting and route map guidelines, resources available, access to available expertise within and outside the Council, and levels of partnership input to move into this area of work.
- many local authorities viewed their and Welsh Government’s focus as being too narrow and aim to work within communities to progress decarbonisation across the territory.

3.8 The research team have reflected on these scope and ambition of the plans and developed a **Decarbonisation Dimensions Model** (see overleaf). This illustrates the multiple dimensions of decarbonisation activity that a local authority could operate within in the first column and a description of the activity within and outside the organisation in the second column. The dimensions described are not mutually exclusive and could provide authorities, the WLGA, and the Local Government Decarbonisation Strategy Panel with a useful tool, and nomenclature, to understand progress towards different dimensions of decarbonisation.

Local Government Decarbonisation Dimensions Model



Dimension	Scope and scale of decarbonisation activity in the organisation and authority area
Compliance	The authority is focusing on responding to reporting guidelines and cost efficiencies for decarbonisation on a case by case basis where the opportunities arise. A Plan has been brought together to meet reporting requirements.
Operational	The authority is building on its' existing activity to deliver decarbonisation through reduction of carbon and other GHGs across operations driven by expert internal advice. A Plan already exists with an internal focus and is being refreshed to meet 2030 guidelines and report progress on a Climate Emergency Response.
Organisational	Cross-organisation working groups are being refreshed/established to co-ordinate and report on the organisation's performance in this area. A new Plan has been/is being developed to report on organisation-wide activity to meet 2030 guideline and to report progress on a Climate Emergency Response. Communities and staff are engaged by the authority to understand decarbonisation and how they can contribute.
Corporate	New approaches to corporate working are being established ensuring decarbonisation is part of business planning, financial planning, impact assessment and decision making. Senior members and officers are driving corporate change to improve performance on decarbonisation and measure impacts and reductions across portfolios.
Project	The authority is driving and implementing projects in the community to reduce its own, and the authority areas' carbon footprint. It is using its capital programme, external funding and partnerships to deliver decarbonisation through infrastructure, landscape, townscape and community projects.
Partnership	The authority is seeking to use its influence outside the organisation to create the conditions for other bodies, and communities to decarbonise. It is playing a community leadership role through its funding, influence and expertise to build capacity in its partnerships to decarbonise.
Place	The authority is working on place-based plans in individual towns, communities and landscapes to identify opportunities for decarbonisation, ways to deliver these to benefit the community and reduce the carbon footprint of the authority area.
Territorial	The authority is bringing partners together to understand the carbon footprint of whole authority area (the territory), identify ways to decarbonise at this scale and working with partners on territory-wide measurement and projects to achieve this.
Strategic	The authority has adopted a strategic approach to working with UK and Welsh Government, the private sector, utilities, transport partners, neighbouring authorities on developing the strategic and financial structures for societal decarbonisation within its boundaries and region.

3.9 We suggest that this model could be useful for local authorities and their partners to discuss the scope and ambition of their decarbonisation planning, by¹¹:

- exploring their current levels of practice within these dimensions, and how they wish to develop these in the future
- self-assess within the organisation and identify ways to improve their approach in each dimension
- peer review each-others' approach to decarbonisation
- map current activity within the local authority area and region
- develop their own narratives for activity in each dimension

3.10 We recommend that local authorities and their partners are encouraged to use this tool (or similar) to develop a reflexive approach to their work on climate change and decarbonisation. Reflexive governance is a more self-aware and critical mode of thinking that continually questions the ends and means of policy¹². Undertaking this type of exercise may enable officers and local authority members to explore the scope and ambition of their plans to address some of the needs identified in later sections of this report.

¹¹ The research team used the Decarbonisation Dimensions Model as the basis for an e-survey prior to the workshop in September 2021, asking attendees to rate their progress in each area. When asked whether similar self-reflective tools could be valuable, 84% felt that there was some value in considering their progress towards decarbonisation against such a tool.

¹² Stirling, A. (2006) Precaution, foresight, sustainability: Reflection and reflexivity in the governance of science and technology, in: J.-P. Voss, D. Bauknecht & R. Kemp (Eds) *Reflexive Governance for Sustainable Development*, pp. 225–272 (Cheltenham: Edward Elgar).

4. Governance of Decarbonisation

4.1 The research focused on both internal and external governance for decarbonisation, the way in which local authorities were organising and re-organising themselves, and others to support and deliver the decarbonisation work described in their plans. This section focuses on internal governance arrangements and external work with partners.

4.2 **Internal governance** the one-to-one discussions, in particular, gave us insight into the different governance approaches being adopted to involve officers, elected members and senior leaders across and within the organisation.

4.3 Our overall findings are that:

- there is a shift occurring from a traditional 'operationally focused' decarbonisation activity towards organisation-wide decarbonisation programme management (although some Councils are struggling to move into that space.)
- political and executive leadership for decarbonisation is getting stronger in many authorities and that this is seen as a big change from previous arrangements. (4 had established cross-party groups and 4 had the CEO or Leader providing leadership)
- many Councils are identifying additional resources (staff and finance) to support decarbonisation planning

4.4 We found that authorities fall into three categories in relation to governance: programme driven, working group driven, and operations driven, as follows:

Programme driven: 9 of the 22 authorities' have established corporate working on decarbonisation, including cross-party working groups and committees. 6 of these have established programme boards, or equivalent, including chief executives, managing directors, cabinet members and leaders of the Council. In some cases, there are strong links to performance management, financial management and business planning – as well as key policy areas including development planning and economic development. In many cases, scrutiny committees are involved in monitoring progress.

Working Group driven: 6 of the 22 have corporate working groups that are predominantly officer led with a Head of Service or Director reporting progress to Cabinet/Executive/ Council. Lead Members are involved. In many the focus is reporting on progress of projects which contribute to decarbonisation as well as reducing organisational emissions. Some are developing programmes of work and aspire to develop Programme Boards.

Operations driven: we found that 7 of the 22 authorities' approaches to governance are operations-driven focused on reducing operational emissions, driven by individual service area business planning and individual officers. In these cases, authorities have limited or no corporate working on climate change, with progress predominantly officer-led with some member involvement. Reporting of progress in these authorities is often via Director to senior

leadership and corporate management teams or similar. In some of these cases the officer involved recognises the need to establish more robust organisation-wide approaches and are working towards this.

4.5 From documentary evidence, on-line material from democratic services sites and from our one-to-one discussions, **Political leadership** on decarbonisation seems to be coming predominantly from: Cabinet members with environment portfolio; followed by those involved with economic regeneration or equivalent; the final key grouping are cabinet members responsible for communities or neighbourhood services.

4.6 Thirteen local authorities had recently undergone or were undergoing recruitment for staff to help to deliver decarbonisation plans ranging from decarbonisation programme managers to project staff. In some, the new programme staff were intended to provide capacity to work organisation-wide and strategically on decarbonisation outside the Council. Some concerns were expressed about the availability of skills in the job markets and some Councils had been unable to fill posts.

4.7 Some Councils use a RAG traffic light approach to monitor progress of decarbonisation plans through Cabinet/Executive and a small number assess performance and progress through business planning procedures. However, in many plans it is unclear how progress will be monitored. We suggest:

- that further attention needs to be given to how progress on the delivery of plans is monitored, scrutinised and reported internally and externally.
- authorities should be clearer about the accountability framework for delivery of the plans to enable internal and external scrutiny of progress.
- authorities should be clear about the role that the GHG baseline -reported to WG plays in monitoring progress of decarbonisation plans

4.8 **External governance:** We also sought evidence on external governance arrangements to support decarbonisation planning. Many other organisations and partnerships such as Public Services Boards (PSBs) are also working on decarbonisation. How is local government working with others to deliver on decarbonisation planning?

4.9 We found that while there was significant evidence of **citizen involvement** in consultation and engagement on priorities for decarbonisation, there were few examples for more formal citizen involvement in Plan delivery on an ongoing basis. A citizen climate assembly has been established in one PSB, with a further two aspiring to establish one. A small number of authorities have young people formally involved via Youth Fora through the PSB. This is an area where the officers interviewed felt that they needed advice and support: (see Section 8 on support needs, where this issue is discussed in more detail).

4.10 We found that most **Public Services Boards** had sub-groups established to focus on climate change and decarbonisation, and Well-being Plans had clear objectives on building capacity and delivering projects to contribute to

decarbonisation. We sought views from officers on how they engaged with other PSB organisations on this agenda.

4.11 Our general findings are that while many officers leading on decarbonisation are supportive of PSB activity on decarbonisation, many are unclear on what PSBs are planning to deliver, have limited time and resources to engage with PSBs and many only have limited involvement. Some felt that most organisations were working independently from each other at a PSB level. There is also uncertainty on the added value for decarbonisation from regional PSBs or Coordinating Joint Committees.

4.12 A common comment was that PSBs needed to progress from talk and mapping on decarbonisation to specific collaborative interventions on the ground. There are some exceptions where PSBs have focused engagement between academics, utilities and public bodies on decarbonisation, with distinct interventions planned, and/or a clear relationship between PSB activity and internal approaches to decarbonisation. These are the exception.

4.13 There is a clear capacity issue for local authority decarbonisation leads to effectively engage externally with PSBs and other partnerships, while at the same time delivering internal programmes of decarbonisation.

4.14 The 1-1 discussions highlighted that further work needed to be done to develop collaborative approaches to carbon sequestration with the support of Natural Resources Wales. A common comment was that more input was needed from NRW to support local authorities to understand the potential for sequestration through training, data provision and mapping and to support develop baseline data on this issue, as well as identifying specific opportunities for sequestration on the ground.

4.15 **Partnerships** - our analysis found that while the focus of most plans was on decarbonisation of the council 'footprint,' a wide-range of partnership work was referenced as contributing to reduction of Council emissions through:

- strategic large scale low carbon energy projects.
- housing re-fit
- technological advice
- energy procurement
- recruiting regional staff resource
- research on baseline data and technology
- pension funds and
- sequestration.

We found very little evidence of the organisations involved in these projects being drawn into more formal governance arrangements to address territorial emissions.

4.16 Our documentary analysis provided many examples of partner 'lists' as part of the strategic context for plans, including reference to regional economic deals and their Boards, registered social landlords, Welsh Government Energy Service and cross border partnerships. While we were able to get some understanding of

specific activity in the 1-1s, we suggest that decarbonisation planning could be clearer on potential partner contributions to reaching Net Zero – for the Council, public sector and the Council territory area.

4.17 Specific references were made in some Plans and 1-1 discussions related to the following:

- Welsh Government Energy Service and business and industry were seen to provide essential capital, technical and technological expertise.
- regional deal activity is mentioned as a contributor and partner but there are few specific examples of added value or specific collaborative working (even though many of the interventions and projects through regional deals are focused on decarbonisation e.g., low carbon infrastructure)
- a small number of authorities are focused on regional strategic projects with links to authority work on economic development and regeneration – both low carbon energy and beginning to address infrastructural issues
- the value of the work of regional energy hubs in England¹³ where they support the work of local authorities and Local Enterprise Partnerships to coordinate, facilitate and deliver transformation of energy system through projects project support and investment.

4.18 At present, the evidence suggests that governance within most Councils is evolving to support delivery of their own Plan, focused on reducing their own carbon footprint. We believe that many local authorities are ‘under-selling’ their actual and potential role in achieving Net Zero through their work with others. We also suggest that there is a need in many Councils to link more effectively with external partners on this agenda within the PSB and region.

4.19 At the local level, we suggest that here would benefit in local authorities considering options for establishing more joined-up strategic approaches to engaging partners and citizens in decarbonisation, as part of their work to address the climate emergency – to develop and resource their external governance on this issue – and reflect this in their forward planning.

4.20 Many examples exist of this type of strategic partnership work across the UK, with individual Councils across the UK are broadening their governance approach to climate change: Bristol City Council have a new advisory committee on climate change and new board.¹⁴ Devon Council have established a Climate Change Response Group¹⁵ with 25 organisations from across sectors including health, university, utility and district council partners. Belfast City Council co-chair the Belfast Climate Commission with Queens University and Leeds Climate Commission¹⁶ has a long-established and effective governance approach, with a citizen’s jury.

¹³ <https://teesvalley-ca.gov.uk/business/key-sectors/energy-and-renewable/the-north-east-yorkshire-and-humber-energy-hub/>

¹⁴ <https://www.bristolonecity.com/bringing-a-wealth-of-expertise-to-brisstols-net-zero-2030-ambition/>

¹⁵ <https://www.devonclimateemergency.org.uk/governance/devon-climate-emergency-response-group/>

¹⁶ <https://leedsclimate.org.uk/about-leeds-climate-commission>

4.21 Participants in the research identified support needs in in the area of governance, especially through sharing effective methods of internal governance, and would welcome support to explore the potential for new arrangements for external governance, with officers and members.

4.22 In the discussions held with officers responsible for decarbonisation planning in local authorities, there was little or no recognition of either the need to engage workforce representatives in the planning process, or the potential benefits of doing so at an early stage. Decarbonisation will bring new ways of working with implications for both public sector and contracted workforces, for example active travel may impact on workers' ability to fit in with child-care, shopping, school runs etc. However, we suggest that there are opportunities to ensure workforce issues and Trades Union participation moving forward including:

- embedding early consultation, or ideally co-production, with workforce representatives to accelerate progress towards Net Zero 2030 and ease the implementation of new working practices.
- full consideration of workforce impacts as part of all plans, recognising the assets within the workforce to support action planning and leverage resources within decarbonisation teams.
- developing WLGA guidance for Local Authorities on how to engage with the workforce at an early stage in designing and iterating decarbonisation plans.
- taking the above approach would enable authorities to comply with draft legislation on Social Partnerships and Public Procurement¹⁷ which includes a well-being duty on public bodies to consult with its recognised trade unions when making strategic decisions.

¹⁷ Draft Social Partnership and Public Procurement (Wales) Bill
<https://gov.wales/draft-social-partnership-and-public-procurement-wales-bill>

5. Nature and scale of interventions in plans

5.1 In this section we outline the nature and scale of interventions listed within local authority decarbonisation plans. In one-to-one interviews, local authority representatives acknowledged that interventions listed in action planning documents do not represent an exhaustive list of all decarbonisation interventions taking place. However, Plans provide us with an important insight into how local authorities are framing, communicating, driving and resourcing activity on decarbonisation.

5.2 We were particularly keen in our documentary analysis to focus on specific actions and interventions that Councils were committed to, rather than general ambitions, and to explore the progress against these commitments in our one-to-one interviews.

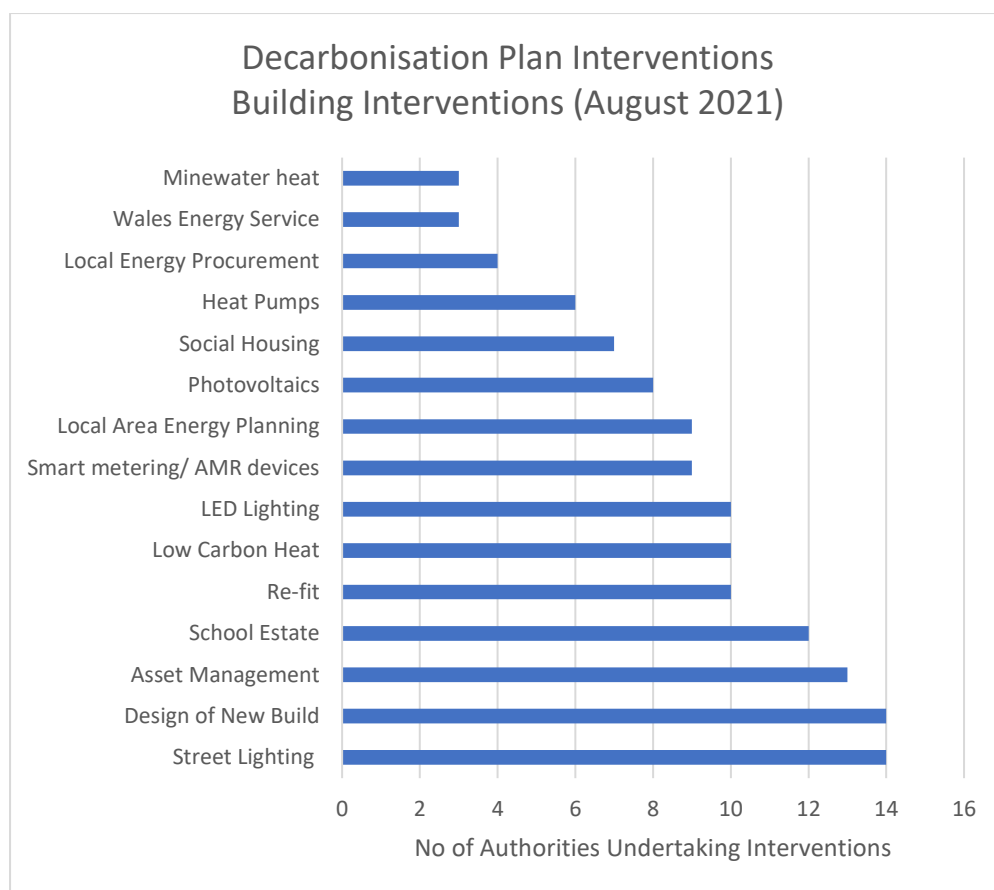
5.3 Interventions listed in decarbonisation plans were analysed according to four priority areas including Buildings, Mobility and Transport, Procurement, and Land Use. These areas reflect the priority areas identified by Welsh Government in their report 'Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector'. Listed interventions were categorised into each of these four priority areas, and the number of local authorities engaging in and listing specific interventions was calculated.

Buildings

5.5 Interventions targeting building and estate emissions were among the most common interventions listed in decarbonisation planning documents. In many local authorities these activities were in progress with a strong pipeline of planned interventions building on past practice.

5.6 Building interventions targeted emission reductions through installation of new energy efficiency technologies, management of assets, new building design, and integration of renewable energy generation assets.

5.7 When compared to the Welsh Government route map for decarbonisation, interventions taking place around the decarbonisation of buildings seem to be sufficiently aligned with Welsh Government's projections for Public Sector activity between 2021-2022, with the climate impacts of built estates being generally well understood and substantial progress on energy efficiency opportunities through, for example, low energy street lighting, asset management and works under the Re:fit programme. There is some evidence of planning for low carbon heat pilot projects, such as area heat networks, but this is generally acknowledged as a challenge at present.

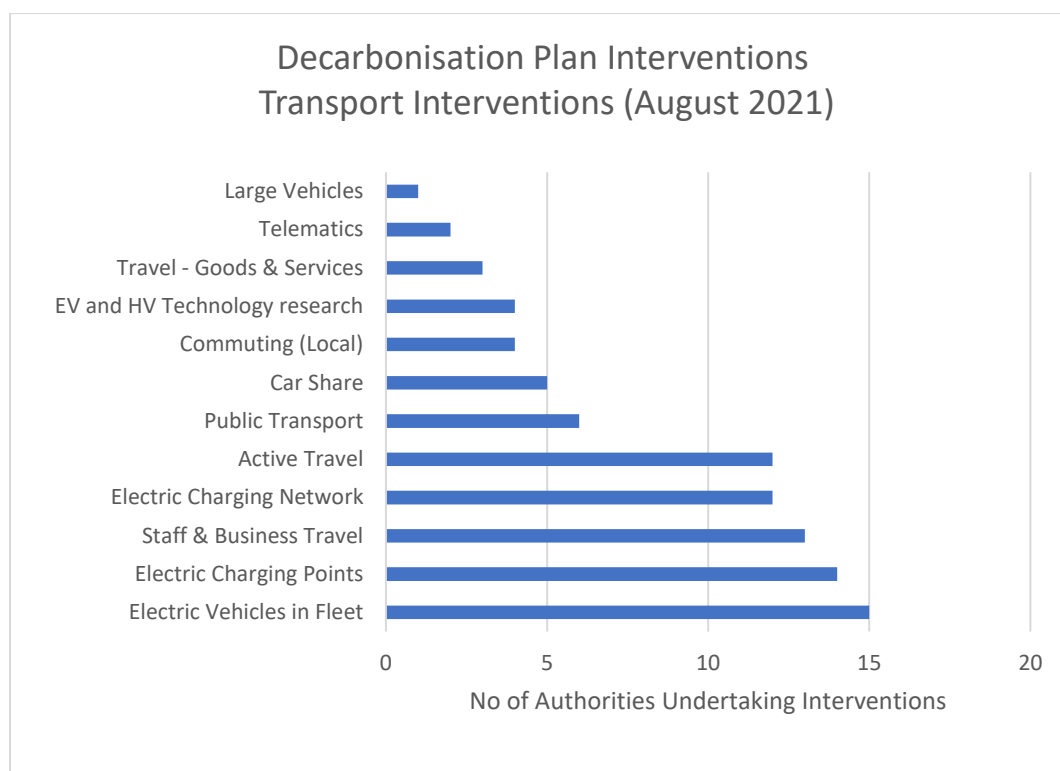


Transport Interventions

5.8 Transport intervention plans focused predominantly on the development of EV fleets and local charging infrastructure, with fleet work receiving ongoing support from the Welsh Government Energy Service (WGES) and grant support from Welsh Government. Few authorities had plans for large vehicles – possibly reflecting the challenges faced in sourcing these.

5.9 Interventions and targets were established in many plans to address staff travel and deliver on wider policy objectives of active travel and public transport.

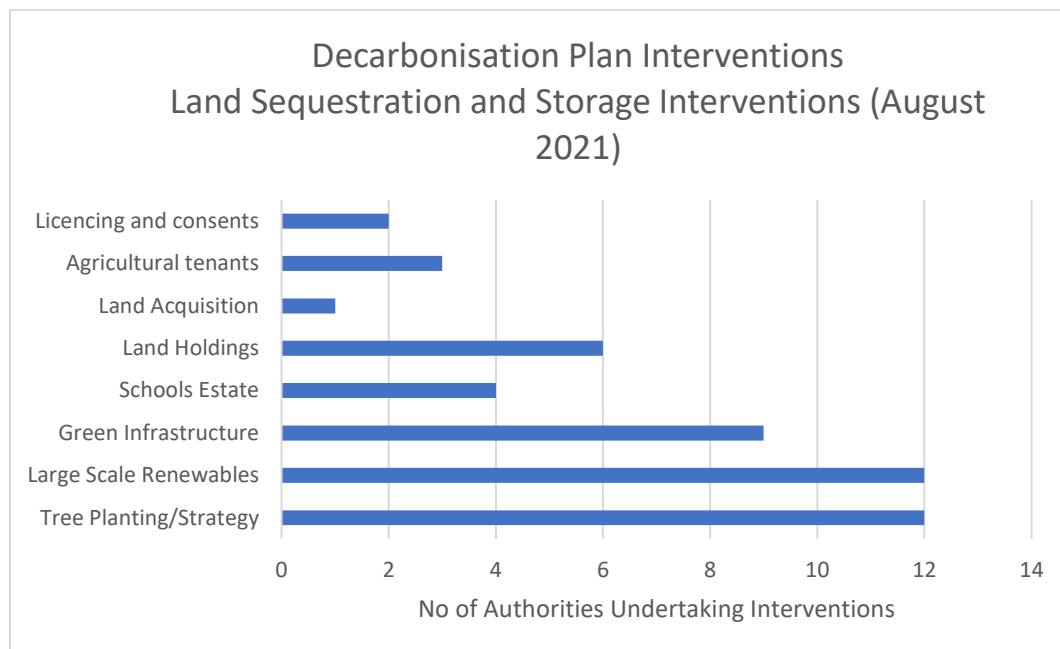
5.10 A small number of plans included specific interventions focussed on research and evidence to build a business case for investment in hydrogen technology and influence local authority transport decisions. Finally, only a limited number of interventions referred to the wider strategic work of local and regional transport planning.



Land Use interventions

- 5.11 Land use interventions listed in the decarbonisation plans tended to focus on the role of afforestation and woodland creation for the purpose of carbon sequestration. Interventions ranged from commitments to planting trees at a particular site, to authority-wide tree-planting targets. Where carbon sequestration interventions were listed, the nature of the interventions were narrowly focussed on tree planting rather than wider interventions in vegetation and soil maintenance.
- 5.12 Large scale renewable energy generation was commonly referenced as a key feature of land use for the purpose of decarbonisation. Many local authorities had undertaken studies to assess the viability of large-scale renewables at local authority owned sites. In many cases, however, the costs of grid connection were found to be prohibitive in renewable energy generation applications. The removal of Feed in Tariffs (FITs) has also hindered the financial viability of many local authority-led renewable energy projects.
- 5.13 A number of plans highlighted the development of green infrastructure strategies. However, there was limited detail contained within the plans regarding how these would be developed, and implemented, and how these strategies would fit within the wider decarbonisation agenda.
- 5.14 There was some limited reference to the role of land holdings, land acquisition, tenant farms, and school assets in decarbonisation planning, suggesting that sequestration is being seen as a valid core purpose for public land, in line with the guidance.

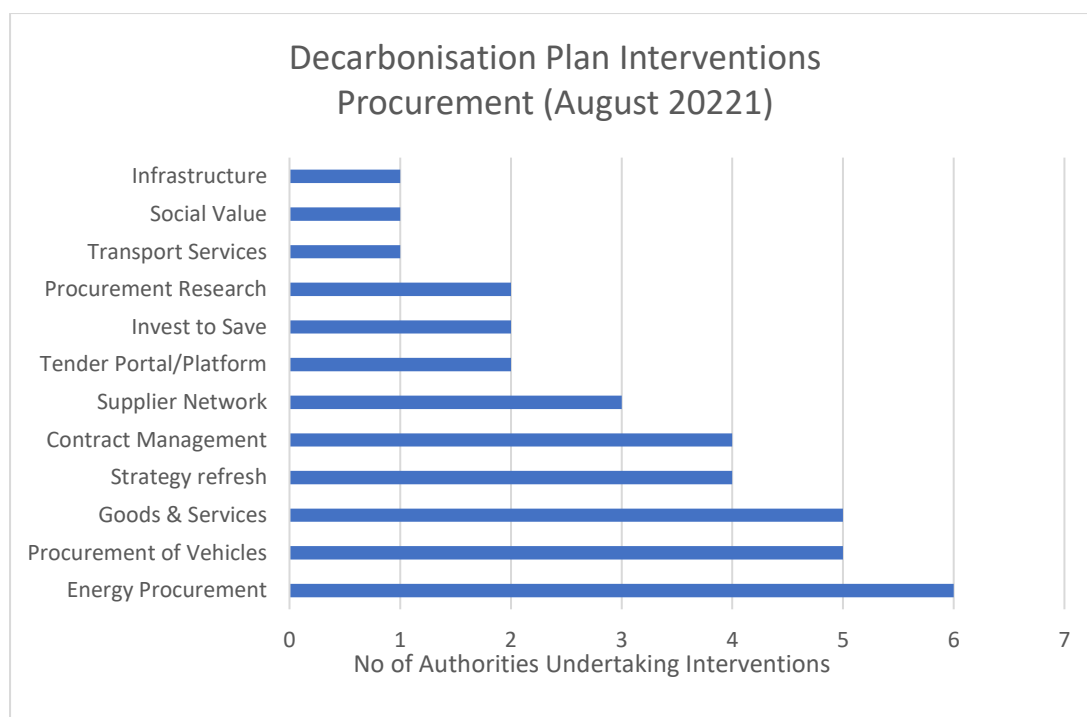
5.15 The evidence from analysed plans suggests that when compared to transport and building interventions, land use is an undeveloped area for many local authorities with potential for further investigation, improvement, and integration into decarbonisation planning.



Procurement interventions

5.16 Welsh Government Reporting Guidance includes scope 3 emissions, and many plans make reference to measuring scopes 1, 2 and 3. However, only a limited number of plans include specific interventions around the procurement of goods and services, despite many local authority representatives acknowledging that procurement makes up a significant proportion of their total authority emissions.

5.17 Among local authorities which have listed procurement interventions, energy and fleet are most likely to be mentioned, although there are some commitments to refreshing procurement strategies and processes, changes to contract management and engagement with supplier networks.



Analysis

- 5.1 Assessing the number of interventions taking place within each of scopes 1, 2 and 3 shows that the most common interventions are taking place within scopes 1 and 2. Whilst there were some interventions taking place within scope 3, there is no single consistent approach across local authorities.
- 5.2 Interventions targeted at scopes 1 and 2 received widespread support from the Welsh Government Energy Service. Interviews with local authority representatives highlighted there was limited national support for interventions taking place within scope 3.
- 5.3 Our overall view is that significant progress has been made towards reducing scope 1 and 2 emissions, particularly around operational emissions in building and fleet. Conversely, there are fewer interventions in scope 3, especially in the areas of procurement and land use.
- 5.4 Based on the evidence we were able to gather, the most commonly cited interventions are those receiving external support from Welsh Government such as the WGES and Re:fit Cymru. This suggests that external support has stimulated change where internal capacity has been lacking.
- 5.5 Many local authority practitioners highlighted that a key challenge for local authorities remains low carbon heat, especially in rural areas. We suggest that this should be a focus for attention and support going forwards and that greater support at a national level is required to address this.
- 5.6 On fleet, the evidence suggests there is a strategic vacuum in terms of understanding Welsh Government policy direction on fuel choices for heavy service vehicles that is hindering local authorities' ability to make decisions in this

space. Whilst to some extent this is a timing issue, some transparency around direction of travel would help to inform transport planning.

- 5.18 We suggest that land use activity to date has been predominantly limited to tree planting and some large-scale renewables. More support may be needed to develop systems-based approaches to land management for carbon sequestration.
- 5.19 We suggest that there needs to be more integration of work between Councils and well-established landscape scale partnerships e.g., Sustainable Management Scheme to understand their potential contribution to the carbon reduction. Area Statement and Opportunity Catchment work through NRW could be more closely integrated with Council actions to reduce carbon both on Council own land and for the territory as a whole.
- 5.20 Co-ordinated partnership work on this between landowners, NRW, farming organisations, water companies and local authorities would also contribute to the delivery of payment for ecosystem services schemes, which are central to changes land management policy and agricultural payments between now and 2030.

6. Progress and delivery on Scopes 1, 2 and 3 emissions

6.1 In this section of the report, we examine the progress made by local authorities in the development and delivery of decarbonisation action plans.

6.2 Overall, local authorities were still developing their understanding of the nature and depth of the requirements from Welsh Government and decarbonisation strategies. Delays in the publication of Welsh Government reporting guidance, discussed previously, had hindered progress in action plan development for a substantial number of local authorities.

6.3 At the time of writing local authorities are at different stages of the decarbonisation planning process:

- 11 local authorities have plans in place that they regard as adequate without further updates.
- 3 local authorities have plans in place that need updating to reflect scope 3 emission requirements.
- 8 local authorities are still developing finalised action plans.

6.4 It is clear from talking to local authority representatives that the progress of each authority differs based on the scope and ambition of plans as well as the stage of delivery.

6.5 Authorities are starting from a range of baselines, with varying levels of capacity to deliver and different arrangements for assessments and delivery. The COVID-19 pandemic has had clear and profound impacts on decarbonisation planning in some areas, as resources have been diverted to emergency planning and recovery in relation to the pandemic.

6.6 We suggest there remains some obscurity around what a net zero local authority might look like. This is compounded by the fact that there is no one clear route to net zero and no current demonstrable examples of a net zero local authority.

6.7 While the path to net zero will likely look very different for different local authorities, we suggest that sharing of best practice case studies will likely aid local authorities in this challenge.

6.8 Best practice sharing is currently occurring to a limited extent across a number of informal structures. There is potential to formalise the sharing of best practice and develop a clear understanding from local authorities of what information is required within each case study.

6.9 Results from one-to-one interviews as well as the online survey self-assessment highlighted how climate emergency declarations influenced the progress and delivery of decarbonisation action plans. At the time of writing, 17 of the 22 local authorities in Wales have declared climate emergencies. The evidence suggests that these declarations are driving change within local authorities, providing the legitimacy and drive them to embed decarbonisation across all areas of operation.

6.10 Several local authorities were in the process of appointing decarbonisation managers to drive the decarbonisation process. Thirteen local authorities were either actively recruiting decarbonisation officers or had recently appointed one.

Carbon literacy training has taken place in several local authorities and had reportedly raised awareness of the issue amongst both officers and members.

- 6.11 We noted a tension in delivery arrangements between breadth and depth of intervention according to the ownership of the Net Zero planning process. For example, where decarbonisation is managed by an energy team, energy interventions tended to be emphasised in delivery. Driving the Net Zero message and behaviour change, across all directorates, was found to be a challenge. For those taking a more corporate approach, initial progress was often slower at the outset, but it was felt that this approach would bear fruit in the longer term.
- 6.12 The Welsh Government Route Map for Decarbonisation suggests that the effort should be focussed on the public sector's own carbon footprint – that is decarbonising the local authority's organisational emissions, rather than wider territorial emissions in the local authority area. Many local authorities viewed this focus as too narrow and have been looking to work more widely with community and local businesses to progress decarbonisation across the territory.
- 6.13 In some cases, it was felt that the focus on establishing a baseline measurement had detracted from progress towards the overall 2030 target, with data becoming a substitute for planning. The current roadmap was described by one authority officer as a “comfort blanket.”
- 6.14 Our view is that many of the current plans had little information on how progress in delivery would be monitored, scrutinised and reported internally and externally. We suggest that authorities should be clearer about the accountability framework for delivery of the plans to enable internal and external scrutiny of progress.
- 6.15 We suggest that the Welsh Public Sector Net Zero Carbon Reporting mechanism has a role to play in this, reporting on emissions baselines. However, some authorities have used complementary or sometimes conflicting approaches to reporting on baselines and plan implementation.
- 6.16 The remainder of this section discusses the delivery and progress of decarbonisation plans across the three scopes. Interventions are taking place across a broad range of activities but maintain a strong focus on scopes 1 and 2. Most of the local authority activity to date has concerned establishing baseline measurement across scopes 1 and 2, with scope 3 presenting more significant challenges, beyond limited interventions regarding active travel and staff commuting.

Scopes 1 and 2

- 6.17 The majority of local authorities have made good progress on scope 1 and 2 emissions, with a strong focus on energy efficiency in buildings and fleet reviews. Some of those we consulted felt that the “low hanging fruit” had been addressed and that the work would become more challenging going forward.
- 6.18 Several local authorities have invested in ground mounted solar farms, to generate an income stream when FITs were in place, but now with a focus on carbon. Grid capacity and the cost of grid connections have been barriers to installation of renewables in many areas.
- 6.19 There was considerable dissatisfaction that renewable energy generation is not admissible for inclusion in the baseline assessment.

Buildings and estate

- 6.20 Generally, local authorities have existing expertise on decarbonisation of buildings and construction. Several have also accessed support from WGES through Re:fit and general support to map opportunities for energy efficiency and building mounted generation on public estate.
- 6.21 Interventions in low energy street lighting and energy efficient lighting in buildings have been widespread across Wales.
- 6.22 New build design and developments were a commonly cited area of best practice with particular focus on the design and implementation of 21st Century Schools. Schools have also been a key area for roof-mounted solar and some authorities have made progress on working with housing (in partnership where stock transfer has taken place) and social services.
- 6.23 However, low carbon heating is widely acknowledged as a challenge, despite some notable schemes such as the waste to energy scheme in development in Cardiff. Rural areas are especially difficult to service with low carbon, shared heat networks and innovative solutions will be needed to support these.

Fleet

- 6.24 Several local authorities have had support from WGES and through Welsh Government to identify and progress actions around fleet, especially EVs. In many cases good progress has been made on cars and light commercials, although heavy vehicles (recycling collection, buses etc) have proved more challenging. Work is progressing on charging networks on public sector estate, often linked to roof-mounted solar PV.
- 6.25 A key issue is a lack of maturity in the low carbon heavy commercial vehicle market. Local authorities are faced with making decisions now or imminently over contracts for vehicles which will still be in service in 2030. Several felt that they were not in a position to choose between EVs and Hydrogen at present and some difficult strategic decisions need to be made on this. One authority was securing second-hand vehicles on a three-year lease to allow more time for effective decision making.
- 6.26 Newport was the first local authority in Wales to obtain electric recycling vehicles (March 2021) and has shared experiences with neighbouring authorities to help de-risk decision making. There is a need for strategic leadership on transport and fleet planning at a Wales level to support this.
- 6.27 We suggest that there would be merit in bringing groups of officers from decarbonisation teams, transport planners and those engaged with transport infrastructure within local authorities to share perspectives and identify ways of working effectively together.

Scope 3

Procurement

- 6.28 The majority of local authorities expressed concern about tackling procurement. The importance of doing so was acknowledged, given that procured goods and services account for some 60% of carbon emissions. However, although some authorities had made commitments to re-organise

approaches to procurement strategies the level of challenge was widely seen as insurmountable at this stage, both as a result of:

- capacity and capability constraints in the procurement process (including assessment of tenders) and
- contract management and monitoring which would become necessary to ensure compliance.

6.29 Some inconsistencies and unintended effects were identified in the decarbonisation reporting toolkit in relation to procurement, especially concerning the emphasis on spending levels. For example, procurement of local food supply would be penalised if it entailed a higher cost, even though this would result in carbon savings against procuring through larger, national distributors.

6.30 The task of capturing and analysing procurement data to identify key sources of procurement-related emissions was seen as problematic in some cases.

6.31 Caerphilly has set up a working group to identify procurement issues, conducting sustainability risk assessments to identify where it was practical to make a difference at the outset. This reflects the social procurement approach taken by Welsh Government, with large construction contracts being taken into scope initially, followed by social care and subsequently cascading to all areas of supply.

Disinvestment

6.32 Few local authorities referred to disinvestment from funds associated with fossil fuels or other carbon intensive activities.

Active Travel

6.33 All local authorities in Wales receive active travel funding from Welsh Government as part of a wider commitment to encouraging walking and cycling.

Grey Fleet

6.34 Grey fleet is a challenging area for many local authorities, especially around location of charging points for electric vehicles which are taken home at night. Issues include:

- Responsibility and mechanisms for paying for charging at home, tax implications etc,
- Staff without access to off-street parking at night
- Implications for what happens to charging points if staff leave employment

Sequestration

6.35 Several local authorities are researching land suitable for tree planting / woodland creation for sequestration. However, Bridgend, for example, recognised that substantial tracts of additional land would need to be purchased to increase carbon offsetting to the level required to meet the 2030 target.

6.36 There are some concerns about the impact of ash dieback and other diseases on the net levels of sequestration that can be achieved.

Analysis

- 6.37 Climate change declarations are driving organisational shifts to incorporate decarbonisation into all local authority activities and the remaining authorities where they have not been declared should be encouraged to do so.
- 6.38 Local authorities highlighted they are in the process of recruiting more resource or have recently recruited more resource to assist with decarbonisation. Some local authorities expressed concern that there were not the skills required in the market and had not been able to fill advertised posts. With increasing competition for scarce resource between local authorities we suggest there is scope to investigate national training and experience building of new officers in the areas of decarbonisation, waste and procurement. As an example, one local authority officer suggested that internships could be structured to provide experience in these areas. We suggest there is also substantial scope for developing CPD programmes in this space.
- 6.39 During our review we noted several examples of informal knowledge sharing around best practice. We suggest that a formal mechanism is developed for sharing case studies, but also to deliver a shared understanding of implementation and the risks involved. This is explored further in Section 8 of this report.
- 6.40 Progress on procurement has been slow to date and remains the biggest risk to achieving the 2030 target. There is a lack of capacity and capability to manage low carbon procurement in local authorities. We suggest that lessons could be learned from the health sector, where contracts above an agreed threshold are managed by NHS Shared Services.
- 6.41 There is a need for shared solutions to issues around grey fleet. A majority of authorities interviewed expressed significant concerns in this area and there is a clear case for joint approaches to identifying solutions – possibly through a challenge fund approach.

8. Measurement of Greenhouse Gas Emission Baselines

- 7.1 In this section we discuss the range of approaches adopted by local authorities in the measurement of baselines, their uses, and issues arising from their implementation. We draw on the data to explore how baselines are being measured within local authorities and investigate the challenges associated with their measurement.
- 7.2 An emissions baseline establishes the levels of organisational emissions and quantifies the likely emission gap to reaching net zero 2030. Welsh Government commitments to public sector to baseline, monitor and report progress towards carbon neutrality, published the “Welsh Public Sector Net Zero Carbon Reporting Guide” in May 2021. The guide details the principles, priorities, and requirements for Welsh local authorities to fulfil their obligations for carbon reporting. The guide requires reporting on scopes 1, 2 and 3 emissions (see Glossary and Appendix A)
- 7.3 At the time of this research many local authorities were still in the process of undertaking baseline measurement using the tool provided and amending existing baselines in light of the tool. From the discussions in our one to ones we estimate only a small number of authorities had completed baselines for all 3 scopes as per Welsh Government requirements. However, there was considerable variation in opinion across authorities on the usefulness and accuracy of baseline measurement, and how they intended to use the baseline data to inform decision making.

Progress in measuring the baseline

- 7.4 We found that the majority of local authorities had made progress in measurement of scope 1 and 2 emissions. In many cases, scope 1 and 2 emissions had already been measured as part of carbon management plans, and local authority baselines in these areas had been established.
- 7.5 Our one-to-one discussions indicated that Scopes 1 and 2 baseline data had supported decision making on interventions on buildings, energy efficiency, transport, and waste, approaches to emissions reduction in leisure centres, schools, street lighting and fleet. While measurement of scopes 1 and 2 is relatively advanced, the evidence suggests a need for improved smart metering technologies to enhance energy measurement and increase the efficiency and effectiveness of annual measurements going forwards. We suggest that increased research into this area may streamline continued emissions reporting in the future.
- 7.6 Measurement of Scope 3 emissions has presented more of a challenge to local authorities. Practitioners are finding difficulty in sourcing and collecting relevant data, some of which requires changes to procurement strategies to include carbon reporting from third parties. Discussions in the one to ones raised procurement, divestment, grey fleet, and land use as key challenges within Scope 3 measurement.

Use of baseline to inform decisions and activity

7.7 As we have previously discussed, the approach to use of baselines differed from authority to authority with many seeing as a useful tool to inform the wider decarbonisation work, they were doing; others seeing its production as a core focus of their decarbonisation work and the interventions they are delivering.

7.8 We found evidence from the one to ones that the work involved in establishing a new baseline in some authorities was seen to be distracting attention away from actions to reduce emissions, and engagement with partners on new opportunities to progress decarbonisation.

Issues with reporting guidance

7.9 Interviews with local authority representatives revealed a number of concerns with the recently adopted Welsh Government reporting guidance.

- the lack of consultation on the guidance prior to publication and delay in publication
- the impact of the guidance on existing baseline measurement, which for some had been outsourced, making in some cases, previous work 'redundant, in other cases confusing communication of key headlines to decision makers
- oversimplification of the approach to scope 3 emissions by using spend as a proxy for emissions. (local authorities who had undertaken procurement approaches focused on local or more sustainable purchasing felt they were being unfairly penalised under this approach)
- limited data availability on procurement and the carbon impact of spend
- lack of guidance on the measurement of the carbon sequestration
- the inability to 'claim' renewable energy generation as carbon reduction on local authority assets.
- how to account for the effect of the Covid pandemic as part of baseline data

7.10 Overall, local authorities seemed to be wary of the reliability of Scope 3 baseline data and the approach advocated by Welsh Government. Many expressed uncertainties whether they would use the data to inform the authorities priorities or decision-making.

7.11 We found evidence from one-to-one discussions that many practitioners were frustrated that the guidance had such a strong focus on organisational emissions for 2030, many suggested that this was inhibiting discussions on territorial carbon emissions and the 2050 target.

7.12 A number of local authorities had used external third parties to undertake baseline measurement. In many cases this had originally been done as part of past carbon management planning for scopes 1 and 2, often using different methodologies to those set out in the guidance.

7.13 In some authorities we found evidence that internal structures had been put in place to measure Scopes 1 and 2 and gather data on an annual basis. However, our understanding is that in many authorities emissions reporting will place increased demand on officer time going forwards.

Building capacity to use baseline measurement

7.14 While local authorities are making progress in establishing baselines in line with Welsh Government reporting guidance, our review of plans and one to one conversations with local authority officers revealed there is much progress to made in building capacity to produce and use the baseline as part of decision making within broader decarbonisation planning activity.

7.15 We suggest that there has been a strong focus on the establishment of initial baselines (sometimes at the expense of planning delivery) but limited action to ensure systems are in place to inform subsequent reporting. Our suggestions for activity to build capacity on this issue are as follows:

- more widespread involvement and engagement with decarbonisation practitioners as practice in GHG baselining develops going forward
- the Decarbonisation Strategy Panel to collate issues with the reporting guidance and co-produce future reporting frameworks going forward, particularly around scope 3 emissions.
- developing a nationally coordinated roadmap to identify how scope 3 emissions can be accurately incorporated into monitoring and reporting in a phased manner, starting with the quickest wins such as construction and transport.

7.16 We also suggest in response to the support needs identified in this research, that the Decarbonisation Strategy Panel starts work to engage practitioners in exploring measurement of territorial baseline information to inform their decision making, and to understand local governments' broader contribution to the Wales Net Zero 2050 goal.

8. Support needs to develop practice in Welsh Local Government

8.1 Participants in the research were able to share their thoughts with us on areas where they would welcome support to address gaps and needs in order progress decarbonisation. This section provides an overview of strategic, evidence, operational and organisational needs. We encouraged those involved to be as specific as possible, to avoid a list of 'ought to's' and 'they shoulds' and wish lists. What emerged was a multi-layered set of support needs that move beyond just asking for more people and more resources. The following sections identify where WLGA, the Decarbonisation Strategy Panel and Welsh Government could focus their support to build capacity and delivery.

Strategic needs at a national level

8.2 Many authorities felt the need for greater clarity within the decarbonisation policy community on **what is meant by Net Zero?** at the organisational; territorial; regional; PSB; Welsh Government; and at a Wales level. Many participants were of the view that NetZero at each of these scales requires different levels of commitment and intervention, they are all valid and inter-related, but that focusing on 'just' the organisation meant that only a tiny proportion of emissions were being tackled through local government activity, and that the approach needed to be broader.

8.3 On **finance for decarbonisation**, there was a consistent view that the following issues needed to be addressed to support decarbonisation activity at the local level:

- longer term and flexible **funding arrangements** to support experiment and innovation.
- upfront financial support for **decarbonisation technology** from major (grid enhancement) to small (heat pumps).
- capital funding schemes with more emphasis on collaboration with the **commercial sector**.
- engaging **finance leads** nationally on ways to build (rather than inhibit) the business case for decarbonisation (e.g., a WLGA Finance Directors workshop to understand innovative practice for example the role of pensions investment in achieving net zero.)
- and establishing shorter term **financial paybacks** for renewables investments

8.4 Many felt that there was need for **national level research, technical guidance, policy and funding and investment**, to support regional and local decarbonisation activity on:

- **supply chain and decarbonisation**, where national and regional procurement arrangements are key determinants of practice; and due diligence on emerging technology e.g., hydrogen could be delivered nationally
- **low carbon infrastructure** to enhance grid capacity to support large scale renewable energy projects and electric vehicle charging, where large scale

investment and partnership work is required at regional levels to inform decision-making on operational investment

- **market development for technology and skills** to support decarbonisation – to ensure that skills and technology are in the ‘pipeline’ to support delivery **regional energy hubs** – establishing hubs, as has been done in England¹⁸ to coordinate, facilitate and deliver transformation of energy system through projects project support and investment.

8.5 There were also some specific asks of WLGA from participants, including:

- greater lobbying for resources to deliver Net Zero via WLGA and engaging Senedd Members to continue resourcing this ‘policy space’
- strong leadership for WG and WLGA to retain profile of work at senior levels of decision making across the full range of local government activity, to ensure that it remains a priority
- more effective and targeted communications from the Decarbonisation Strategy Panel at local, regional and national levels
- a national decarbonisation observatory to support decarb action through sharing data/practice, research and innovation and discussion across the public sector, higher education, supply chain and Government.
- facilitation of national local government climate change officer group to work on strategic issues, to complement the work of CLAW and regional groups focused on operational decarbonisation

Strategic needs at Local level

8.6 Participants identified the following key areas where support is needed to progress Decarbonisation Plan delivery and broaden the scope and ambition of local work on climate change.

- to develop methods, rationale and practice for a **territorial emissions approach** to reducing emissions together with a territory –wide route-map to progress emissions reduction.
- to use techniques to review and reporting on the adequacy of the **current delivery system** to achieve net zero territory wide – to focus on mapping and where decisions are made
- understanding effective ways to establish **place- based approaches to climate change** both decarbonisation and climate adaptation -and techniques to support this.
- identifying an effective approach to develop a county –wide and regional approach to **infrastructure to support decarbonisation** involving rail, highways, grid, business and communities.
- ways of developing a response to CCRA3 on **climate risk and adaptation planning** for the authority and local partners.
- developing **external governance** to address the climate emergency - to explore the merits and value of climate assemblies, local climate commissions and citizens assemblies to pursue decarbonisation.

¹⁸ <https://teesvalley-ca.gov.uk/business/key-sectors/energy-and-renewable/the-north-east-yorkshire-and-humber-energy-hub/>

8.7 Our analysis suggests that local authorities want support from WLGA and others with information and evidence on practice to push the boundaries of what they are already doing on climate change- and to develop a business case for this.

Evidence and measurement needs.

8.8 Officers were keen to improve the accuracy and usefulness of baseline emissions data, indicating support needs for toolkits, spreadsheets, and capacity support for measuring:

- Scope 3 emissions
- carbon sequestration and the biodiversity baseline (data needs; approaches to collaboration and reporting)
- area –wide review of land use for sequestration potential
- accounting for the positive impact of local spending in relation to carbon
- an input spreadsheet to track development in the supply chain
- monitoring carbon impact of procurement policy decisions
- funding to procure aerial thermal heat mapping

8.9 In our view the two priority areas for improvement relate to the evidence around carbon sequestration and procurement.

Operational needs

8.10 Participants were also able to identify skills development which would support operational activity in procurement, transport, buildings and carbon sequestration including:

- **supply chain emissions** – developing regional skills sets to build evidence, monitor, inform decision making and track reductions
- **technology** - technological expertise and input to inform decision making on investment particularly related to EV, Hydrogen and other technological changes and implications for procurement
- **project management skills** – developing and increasing the availability of staff with the multiple skills sets required to deliver low carbon projects; including the skills to bid for and administer funding
- **carbon sequestration and storage** - specialist input on opportunities for Council property and across the territory, delivery of sequestration projects with partners, measuring the impact of projects and accessing funding to support sequestration.

8.11 The one-to-one discussions highlighted a general concern that there is a shortage of people with the right skills to work on the specifics of decarbonisation projects across Wales. We suggest that an area for development for many authorities would be to identify specific ways to address this through skills development actions and resources in post-Covid economic regeneration plans and regional deal projects, and through local educational partnerships.

Cross- organisation decarbonisation

8.12 Many of those involved in the research identified a wide range of support needs which would help themselves, officers, elected members to build their capacity to progress decarbonisation. These fall into three categories: training and skills; resources and finance; and developing effective practice.

8.13 **Training and skills** needs were identified in relation to:

- lobbying skills to challenge normal practice and pursue decarbonisation
- skills to challenge risk culture and negative attitudes in authority
- training in effective methods of screening; assessment; options appraisal; challenge; business case; decision making (not just literacy)
- training in programme, projects, partnership management for decarbonisation
- leadership skills for members to drive regional and local decarb programmes
- training for procurement officers on decarbonisation as part of social value approach
- national coordination of provision of internships to provide experience in these areas of decarbonisation to fill skills gaps.

8.14 **Resource** needs and ways of building the **financial business case** for action within Councils were also identified including:

- dedicated staff resources to address multiple strategic, organisational, community and operational aspects of decarbonisation
- core funding (capital and revenue) for decarbonisation initiatives
- performance management support on reporting on decarbonisation progress
- sharing practice on successful financial business cases for decarbonisation interventions
- sharing approaches of costing, resource requirements, carbon impact and the way the business case was built
- methods of capturing and sharing carbon reduction outcomes of decisions and resulting costs savings.

8.15 **Developing Effective Practice** – many authorities wanted to learn from others experience of effective practice and explore ways of improving their approaches in the following areas:

- ways to develop community-based interventions and to engage citizens in assemblies and juries.
- effective models of corporate working and governance including corporate coordination with clear lines of responsibility
- successful approaches to communications messaging to develop corporate approach
- ways of ‘catching’ and pursuing decarb opportunities across diverse services and partnerships, as they arise
- scrutiny activity to increase the scale and pace of decarbonisation across the organisation.
- effective ways of monitoring progress across multiple projects and portfolios of work

- developing a carbon sequestration approach to achieve both decarbonisation and nature recovery.

Sharing good practice

8.16 A key objective of the research was to identify a range of best practice examples. We were keen to understand what practitioners perceived to be good practice and to understand what the most effective methods would be to share this within the decarbonisation policy community.

8.17 In order to do this, during our one-to-one discussions we asked practitioners to identify areas of activity where they thought they were doing something innovative to progress decarbonisation. We then followed this up with an email asking for further examples. During the September workshop an exercise was run to gather further examples of this practice and ask practitioners about ideas of how practice could be shared most effectively. The discussion about effective ways of sharing good practice provided us with limited insight into what methods or format might be effective.

8.18 However, we were able to gather 44 examples of practice from practitioners, which are listed with brief descriptions in Appendix B under the following categories:

buildings (8)	land use and place based (4)
capacity building and decision making (4)	procurement (3)
community projects (5)	solar farms (5)
heat networks (4)	transport (3)
infrastructure (8)	

8.19 We recommend that these are referred to now before reading our observations on them below.

8.20 These examples focused primarily on the role of the authority in delivery of projects on the ground which delivered low carbon energy generation and building design; or examples of development or buildings which incorporated renewables technology and low carbon materials. There are some useful examples of research, engagement with communities and changes in approach to decision making. There were few examples offered of good practice in relation to procurement or land-use – two major areas of emissions.

8.21 We suggest that there is little evidence in communications material associated with Plans, of authorities producing detailed case studies of their own which contain analysis of why an activity is innovative, the impacts that it will make over its lifetime, and the steps that were taken to develop and implement the activity.

8.22 In our view, in order to produce effective case studies for sharing between authorities, investment should be made by WLGA and the authorities themselves, to produce a set of case studies which utilise a framework of theory of change or similar which focuses on:

- a description of the activity itself
- the inputs that were required to develop it
- the outputs that resulted from the activity

- the short- term, medium-term and long-term outcomes of the activity
- the impact that the activity has/will have both internally and externally

8.23 By approaching case studies in this way, local authorities could learn from each other about the specifics of a project, rather than just the ‘headlines’ of what was done. Case studies could be supplemented by the following activities to share good practice within the decarbonisation policy community:

- demonstration visits to best practice sites
- webinars on good practice under particular themes for example land sequestration
- peer to peer learning on-line using case studies as a focus/tool.
- a commitment from the authority in the case study to be contactable and share insights with peers one to one.

8.24 We make further recommendations on this type of peer-to-peer support in the recommendations in the following section.

9. Recommendations to support Decarbonisation Planning

9.1 This section provides some recommendations to the WLGA on the way forward to support local government activity on decarbonisation to inform their work on Transition and Recovery Support Programme (TaRSP) for local government and the Wales Local Government Decarbonisation Strategy Panel.

9.2 In our view, the needs highlighted above, and commentary in other parts of the report provide WLGA with a clear indication of where support is needed among the local government decarbonisation policy community. We recommend the following types of activities to address these support needs:

- a) **peer to peer learning** - there will be opportunities for peer learning, where, for example an authority, which has invested in developing corporate programme for decarbonisation can share their practice with an authority where this is yet to happen. WLGA could act in a facilitation role to match expertise with need in this respect. The experienced authority could mentor the other. We suggest that this would need careful facilitation and planning via WLGA.
- b) **national online workshops** – where WLGA can convene a workshop/seminar which enables participants examines the area of need, for example coordination of national effort to support low carbon infrastructure, examine emerging practice and areas where collaboration needs to happen – and then WLGA facilitates actions emerging from the workshop – for example on data needs, communication with key parties etc.
- c) **subject specific online learning sessions** – where support is offered on a specific issue, such as measurement of supply chain emissions or effective corporate working, where participants share their experience, receive expert input, effective methods are explored and this learning from this is communicated to key parties
- d) **development of tools and toolkits** – where WLGA takes the lead with expert support to develop guidance and advice on for example measuring the carbon sequestration baseline in local authorities or developing Decarbonisation Dimensions model as a self -assessment toolkit.
- e) **individual authority support** – where WLGA support individual authorities where opportunities arise, for example, supporting them to build a financial business case around a development and benefitting from advice from other authorities, or supporting scrutiny services to frame a scrutiny enquiry on territorial decarbonisation
- f) **joint bespoke member and officer training** – where WLGA facilitate session where members and officers are brought together to explore political dimensions of decarbonisation – for example, the merits of citizens assemblies and climate commissions, or scrutiny, and to explore approaches to leadership.

- g) **policy advice** – where WLGA offer support is to authorities as part of the process of policy and strategy development, for example, advice on Decarbonisation Plans and Action Plans, Place Plans and Regeneration Plans.
- h) **regional integration workshops** – where authorities along with their partners are involved in a WLGA facilitated session to explore the delivery system for a key aspect of decarbonisation on a regional level, inviting authorities, public bodies, those involved with infrastructure together to map out the delivery system, key aspects of decision making and areas for collaboration. This approach might be useful in relation to infrastructure, transport, land use or procurement.
- i) **case study development** – to support the above activity, which utilises a framework of theory of change or similar and are supplemented by demonstration visits to best practice sites; webinars on good practice under particular themes for example land sequestration; peer to peer learning on-line using case studies as a focus/tool; and a commitment from the authority in the case study to be contactable and share insights with peers one to one.
- j) **climate change policy forum /officer group-** establishing, supporting and facilitating a national local government climate change officer group to work on strategic issues, to complement the work of existing national and regional groups focused on operational decarbonisation and to support the Panel in its work.

9.3 In addition to these practical recommendations, in our view, the research indicates a number of systemic issues that the Wales Local Government Decarbonisation Strategy Panel should explore – to identify and resolve systemic opportunities and barriers to decarbonisation that were identified by those involved in decarbonisation planning.

9.4 We recommend that whilst the focus of much activity to date has been on progress towards the NZ 2030 target, the Panel's activity and WLGA's activity needs to be considered in the wider context of achieving the 2050 NZ target. In addition, we suggest there would be benefit in work on the following at a national level:

- undertaking stakeholder mapping to identify how existing initiatives and resources can be streamlined and aligned to maximise strategic purpose for both the public sector target for Net Zero 2030 and the national Net Zero 2050 target
- as a result of this the Panel could play a key role on providing local authorities with guidance on approaches to addressing emissions reduction at a territorial scale – a key area of need.
- The Decarbonisation Strategy Panel taking a lead in providing advice to local government on key strategic such as the following : grid capacity and local energy networks; low carbon heat in rural areas; technical guidance on policy choices on EVs vs hydrogen; national development of smart metering technologies; a national divestment strategy to ensure zero carbon

investment; skills development for decarbonisation in local government; flexible ways of supporting home-based workers to adopt EVs; approaches to financing renewables.

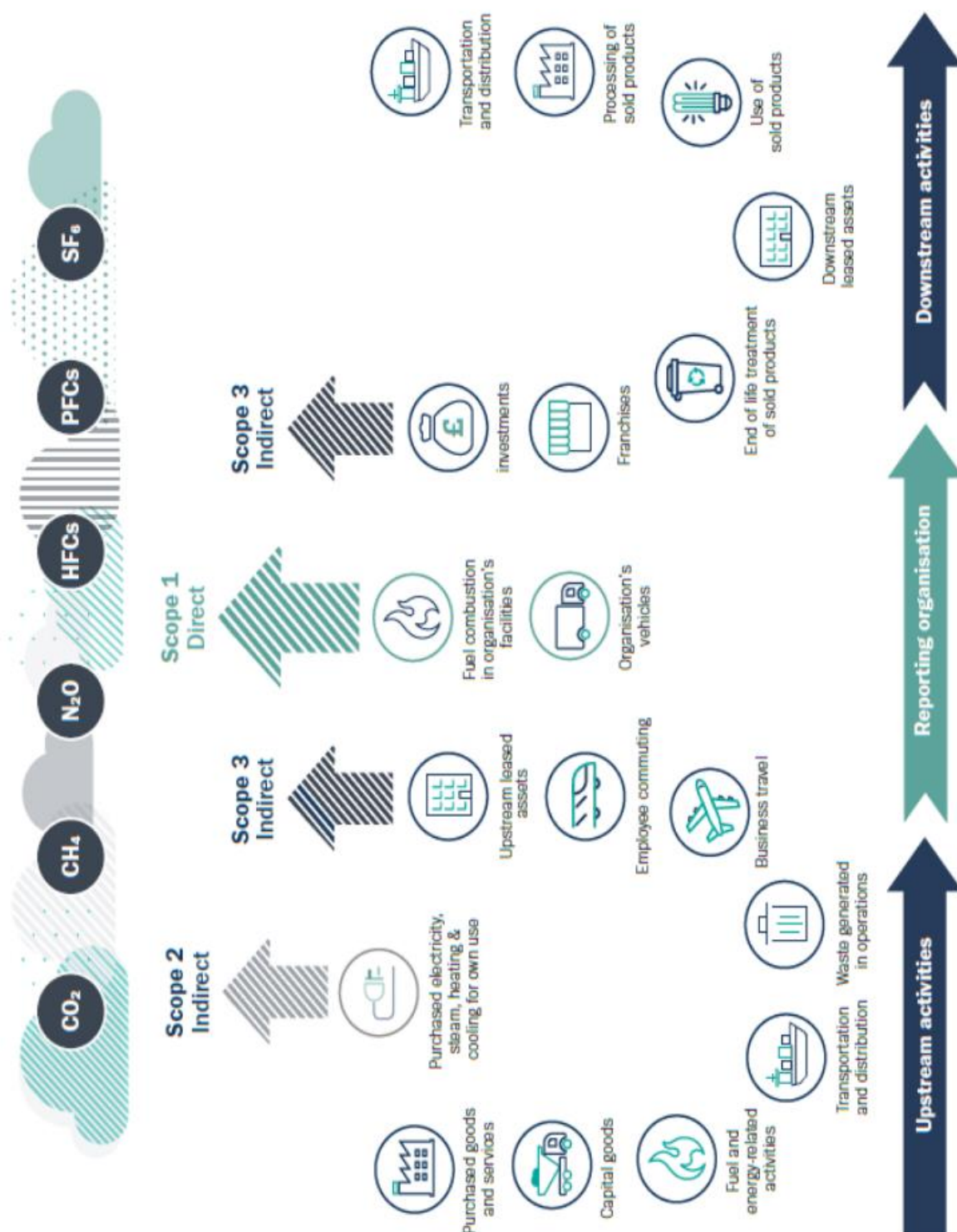
9.5 In all cases we recommend that there are areas of practice where information and case studies from outside Wales could be used to stimulate thinking, debate and practice – for example on regional working, planning climate resilience or citizen's assemblies to stimulate thinking and forward planning.

9.6 We recommend that WLGA invests time in targeting support to practitioners and bringing practitioners together from different policy areas to support each other's work on decarbonisation. This should also involve:

- engagement with senior officer groups so they can share their own experience in progressing decarbonisation through their individual roles in decision making – for example in finance, procurement, asset management and economic regeneration.
- elected members to build their capacity to take leadership in their ward, committee, executive, scrutiny and partnership roles.

Appendix A: Scope 1, 2 and 3 Greenhouse Gas Emissions Diagram

From: Welsh Government Net Zero Public Sector Reporting Guide May 2021 pg. 13.



Appendix B: Case Studies

Building

Vale of Glamorgan Council has worked with industry in the design of schools which are low, and net-zero carbon as part of the 21st century schools' project. As part of the project, 4 schools have already been completed and 13 are in progress.

Carmarthenshire Council –has partnered with Ameresco, an energy service company, to identify a range of measures to reduce carbon emissions across the authority's estate. Phase 1 of the project is projected to save 675 tonnes CO₂e each year.

Conwy CBC – the authority is developing a strategy to rationalise current office space and staff commuting through the Future of Office Working project. The project entails collaboration between HR and asset management to deliver on the strategy.

Rhondda Cynon Taf CBC–has plans to utilise heating from Taff's Well Thermal Spring to heat rooms in Ffynnon Taf Primary School at an estimated cost of £3 million. The plan forms part of a wider project to use Wales' only natural thermal spring as the basis for heating buildings in the local area.

Wrexham Council – Wrexham's Community Health and Wellbeing Facility which is due to open in 2022. This is a 1970s Office Block utilising a 'fabric first' approach to thermal efficiency and establishing photovoltaic panels on the roof.

Denbighshire Council –Denbighshire Rhyl Town Centre Gateway Scheme has established 644 square metres of new green space, created through the purchase and demolition of redundant property.

Neath Port Talbot CBC– the authority is leading on the £505 million Homes as Power Stations project on behalf of the Swansea City Deal. The five-year project is expected to future proof at least 10,300 properties through installation of energy efficient design and technology in both new builds and retrofits.

Vale of Glamorgan Council –has adopted a fabric first approach to building new homes to improve energy performance.

Torfaen CBC – is working with two of the main housing associations in the area Melin and Bron Afon to decarbonise their housing stock.

Capacity building and decision making

Blaenau Gwent CBC– established the Blaenau Gwent Climate Assembly in collaboration with Housing Associations and Civil Society organisations. Local residents identified county wide priorities for tackling the Climate Crisis

Denbighshire CBC amended their constitution to formally include climate principles in their decision-making process.

Monmouthshire Council are working with Cardiff University and Y lab on the Infuse project on skills development for Accelerating Decarbonisation on Cardiff Capital Region (10 local authorities)

Rhondda Cynon Taf CBC–developing a baseline carbon emissions dashboard with Cardiff University to highlight the progress on emissions the local authority is making.

Merthyr Tydfil CBC had carbon literacy 'train the trainer' sessions to develop awareness across the organisation.

Community Projects

Carmarthenshire Council –has partnered with Ynni Sir Gar, a social enterprise, to develop community owned renewable projects.

Monmouthshire Council – has worked in partnership with the local community to address community wide emissions through the Monmouthshire Community Climate Champions group.

Carmarthenshire Council 's Walk the Global Walk initiative. is working in partnership to engage young people in a discussion about meeting the UN Sustainable Development goals resulting in a Carmarthenshire Climate Action manifesto with 8 recommendations which have been endorsed by the authority.

Newport City Council – is working with community solar group Egni Co-op to deliver 2100 kWh roof mounted solar on 27 buildings over 18 months. The project is expected to save the authority 348 CO₂e tonnes annually.

City and County of Swansea – Swansea Environmental Forum has initiated Low Carbon Swansea Bay which established a network of organisations seeking to reduce their carbon emissions and energy costs through sharing knowledge and collaboration.

Heat Networks

Bridgend CBC– is in the process of developing a Town Heat Network project to reduce energy consumption through heating buildings. The Council has established a subsidiary company which will be 100% owned by the authority and enable them to access a £1 million grant from the UK Government to constitute part of the £3.4 million capital budget required for the first phase of the network.

Bridgend CBC– is developing the Caerau Heat Network to extract heat from formal coal mine workings to develop an energy resource for local properties. The project however has faced progression issues with alternative options to the project being considered.

Gwynedd Council– has commissioned a feasibility study to identify options for affordable, effective, low carbon heating in Tanygrisiau including the option to retrofit a district heat network. . If successful, the scheme may be replicated in other local quarrying communities.

Cardiff Council –is developing a new network piping heat from Cardiff Bay's incinerator to reduce the energy consumption associated with heating public non-residential buildings in Cardiff. The project is expected to cost £26.5 million in total and to be completed by 2022, with a projected annual carbon saving of 5600 CO₂e annually.

Infrastructure and R &D for energy generation

Anglesey Council– the Morlais Tidal Energy Infrastructure project, currently under consideration is a potential renewable energy source of up to 240 MW of electricity which could contribute to the authority's emissions reduction and represents innovative practice in terms of utilising tidal energy.

Anglesey Council - a hydrogen hub is currently being proposed in Holyhead with an allocation of £4.8 million for the project as part of the North Wales Growth Deal with connection to the Deeside hydrogen hub.

Neath Port Talbot CBC – in partnership with FLEXIS announced a £24 million research and innovation programme looking into smart and low carbon technologies to develop exemplar case studies from across the UK.

Pembrokeshire Council - has nominated Milford Haven waterway site through the STEP site nomination for the design and construction of a prototype fusion power plant to provide a low-carbon energy source for the area.

Flintshire Council – two former landfill sites at Standard Industrial Estate and Brookhill in Buckley have been used to capture methane. Gas generated at the sites is to be utilised in the production of low carbon energy. During 2014 the two sites produced an estimated 4,300MW of electricity per annum.

Flintshire Council - a hydrogen hub has been proposed in Deeside with around £11.4 million of funds allocated as part of the North Wales Growth Deal. The project aims to develop a low carbon energy source.

Pembrokeshire Council– as part of the Celtic Sea offshore project a number of offshore wind turbines have been proposed to develop capacity for renewable energy generation.

Pembrokeshire Council – the Pembrokeshire Milford Haven: Energy Kingdom project is exploring role hydrogen could play in a decarbonised energy future and building the business case for future investment in hydrogen technology. The project is expected to cost £4.5 million and be completed in 2022.

Land-use and place-based approaches

Cardiff Council - is planning to introduce a city-wide tree-planting scheme, Coed Caerdydd, with approximately £1 million of funding. The intention of the scheme is to plant over 800 hectares of land with trees over the next decade focused on carbon, flooding, water management and resilience.

Torfaen CBC – has consulted with NRW to identify opportunities for better land management approaches including the use of GIS mapping to identify opportunities for carbon sequestration. This has informed a PSB Green Infrastructure Strategy for all publicly owned land in Torfaen.

Powys Council – is using a place planning approach to focus on carbon, climate adaptation and biodiversity. This new town approach is set to be replicated in 9 other towns across Powys.

Vale of Glamorgan Council–obtained WG Local Nature Partnership funding to develop a Green Living Wall on the BSC2 building in Barry. The project will improve biodiversity and offer greater access to Green Infrastructure. The project is expected to extract approximately 41 kilos CO2e per annum.

Procurement

Conwy Council – is working with CLES -the national organisation for local economies, to inform its scope 3 baseline as part of the Conwy Net Zero Supply Chain project.

Denbighshire Council—is using a micro-business approach to decarbonisation as part of the business case for social care grants in neighbourhood schemes.

Flintshire Council – the authority has led on the integration of TOMs into the procurement system and raising awareness of TOMs across staff to integrate decarbonisation into the procurement processes.

Solar Farms

Caerphilly CBC—has sought to develop a 20MW solar farm on previously privately owned land taken on by the council. The project is projected to cost £12 million over its estimated 35-year lifespan. The farm is expected to produce enough energy to power approximately 6,000 homes annually.

Carmarthenshire Council - is currently considering a proposal for the installation of the Hywel Dda UHB solar farm on the edge of Carmarthenshire. It is expected that the project will contribute to renewable energy production in the area over the course of its projected 20–25-year lifespan.

Cardiff –Council is planning to repurpose the Lamby Way landfill site to establish a large-scale, 9MW Solar Farm. The project is projected to produce enough energy to power 2,900 homes annually and to cost £16.3 million over a 35-year period.

Flintshire Council – has commissioned four large-scale solar farms in a bid to reduce authority emissions. Two of the sites represent a £3.1 million investment in 9,000 solar panels which are project to save 800 tonnes CO₂e per annum.

Monmouthshire Council - has established the Oak Grove Solar Farm on council owned land as part of a £4.5 million repayable investment provided by the Welsh government. The site is expected to produce enough energy to power 1,400 homes and save over 2,000 tonnes of CO₂e annually.

Transport

Anglesey Council - has purchased second-hand vehicles to retain flexibility of fleet whilst buying time to explore options decisions over Electric or Hydrogen vehicles.

Blaenau Gwent CBC—has established a depot for trucks and vehicles which has factored in the business case for EV charging points as well as developing skills and training for maintenance of the site.

Pembrokeshire Council is undertaking £4.5 million research and pilot into the potential for Hydrogen Fuel Cell Electric Vehicles. The project is being undertaken as part of the wider two-year Milford Haven: Energy Kingdom project.

Appendix C: Reviewed documents:

Key documents reviewed included the following:

All Wales

Climate Change Committee (2020) Advice Report: The path to a Net Zero Wales Climate Change Committee December 2020
Climate Change Committee (2020) Executive Summary Advice Report: The path to a Net Zero Wales Climate Change Committee December 2020
Climate Change Committee (2020) Progress Report: Reducing emissions in Wales December 2020
Welsh Government (2021) Welsh Public Sector Net Zero Carbon Reporting Guide May 2021
Local Government Decarbonisation Strategy Panel (2021)
Seventh Meeting – Land Use Deep Dive: Minutes and Summary
Welsh Government (2019) Prosperity for All: A Low Carbon Wales (2019).
Welsh Government (2021) Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector
WLGA (2020) Local Authority Decarbonisation Survey

Anglesey

Isle of Anglesey County Council (2021) Enabling the Isle of Anglesey County Council to transition into a carbon neutral organisation by 2030 - delivering a new corporate Climate Change Programme.
Gwynedd and Anglesey Public Services Board Annual Report 2019-2020 (2020)
Isle of Anglesey County Council Plan 2017 – 2022 (2017)

Blaenau Gwent

Blaenau Gwent County Borough Council (2020)
Decarbonisation Plan 2020 to 2030
Blaenau Gwent Climate Assembly Report (2021)
Blaenau Gwent Public Services Board: Annual Report 2019/20 (2020)
Blaenau Gwent CBC Corporate Plan 2018-22

Bridgend

Bridgend County Borough Council Report to Cabinet 30 June 2020: The Bridgend County Climate Emergency Response Programme
Bridgend County Borough Council Report to Cabinet January 2021.: Bridgend 2030 Decarbonisation Strategy, Pathway to a Carbon Neutral (Net-Zero) Council
Bridgend County Borough Council. Report To Subject Overview and Scrutiny Committee 3 19 July 2021:Climate Change Response and Net-Zero Carbon by 2030
Bridgend Public Services Board: Annual Report 2020/21
Wellbeing Plan: Annual Report (2018)
Bridgend CBC Corporate Plan 2018-23

Caerphilly

Caerphilly County Borough Council (2019) Decarbonisation Strategy – Reduce, Produce, Offset and Buy
Caerphilly County Borough Council. Reduce, Produce, Offset and Buy - Caerphilly Action Plan Caerphilly County Borough Council (2020) Energy Prospectus
Caerphilly Public Services Board Annual Report 2019-20 (2020)
Caerphilly County Borough Council Corporate Plan 2018-2023 (2018)

Cardiff

Cardiff Council (2020) One Planet Cardiff: our vision of a Carbon Neutral City by 2030
Cardiff Council Cabinet Meeting Report: 15 October 2020
One Planet Cardiff – A Response to the Climate Emergency
Cardiff Council Cabinet Meeting Report: 20 May 2021
One Planet Cardiff – A Response to The Climate Emergency: Key Progress
Cardiff Public Services Board: Annual Report 2020/21
Cardiff Council Corporate Plan 2021-24

Carmarthenshire

Carmarthenshire County Council (2020) Route towards becoming a Net Zero Carbon Local Authority by 2030 February 2020.
Carmarthenshire County Council (2021) Route towards becoming a Net Zero Carbon Local Authority by 2030 Progress Report: March 2021
Carmarthenshire Public Services Board: Annual Report 2020/21
Carmarthenshire County Council Corporate Plan 2018-23 (updated April 2021)

Ceredigion

Ceredigion County Council (2021) Achieving Net Zero by 2030 – Action Plan
Ceredigion County Council (2019) Carbon Management Plan
Ceredigion County Council (2021) Ceredigion Local Well-being Plan Annual Report (2020-21)
Ceredigion County Council (2017) Corporate Strategy 2017 – 2022

Conwy

Carbon Net Zero in Conwy: The Roadmap for Conwy County Borough Council. November 2020 Aether Ltd & CAG Consultants
Conwy County Borough Council (2021) Climate Challenge: Programme Definition Document 2021-2030
Conwy & Denbighshire Public Services Board: Annual Report 2020/21
Conwy County Borough Council (2021) Review of Corporate Plan 2017-2022 Actions, Measures and targets for 2020/21

Denbighshire

Denbighshire County Council's Climate and Ecological Change Strategy 2021/22 to 2029/30
Denbighshire County Council (Net Carbon Zero and Ecologically Positive Council) 2020 Operational Board: Terms of Reference
Denbighshire County Council's Climate and Ecological Change Strategy Performance Report 2020/21
Conwy & Denbighshire Public Services Board: Annual Report 2020/21
Denbighshire County Council Corporate Plan 2017-22

Flintshire

Flintshire County Borough Council (2021) Achieving Net Zero – Carbon Reduction Action Plan: (and Activity Plan)
Flintshire Public Services Board: Annual Report 2020/21
Flintshire CBC Corporate Plan 2021-23

Gwynedd

Cyngor Gwynedd Carbon Management Plan (CMP)
Low Carbon Council → Low Carbon Gwynedd (2010)
Gwynedd Council Carbon Management Plan 2
(2015) Resource Efficiency Report Assessment of Energy and Water Savings Opportunities for Gwynedd Council. Carbon Trust.
Anglesey & Gwynedd Public Services Board: Annual Report 2020/21

Gwynedd Council Plan 2018-23

Merthyr Tydfil

Merthyr Tydfil County Borough Council (2019) Carbon Management Plan

Merthyr Tydfil County Borough Council (2019) Full Council Report – Carbon Management Plan

Cwm Taf Public Services Board (2019) Annual Report 2018-19 (2019)

Merthyr Tydfil County Borough Council (2021) Focus on the Future: wellbeing in our community 2017-2022: Corporate Wellbeing plan 2020/21 Version 4

Monmouthshire

Monmouthshire County Council (2019) Climate Emergency Strategy October 2019

Monmouthshire County Council (2019) Taking Action on Carbon – Infographic

Monmouthshire County Council (2021) Climate Emergency Strategy Update – June 2021

Monmouthshire County Council (2021) Climate Emergency Action Plan 2020/21 Summary

Monmouthshire Public Services Board Well-being Plan Annual Report 2021 (2021)

Neath & Port Talbot

Neath Port Talbot Council (2020) Decarbonisation and Renewable Energy Strategy (May 2020)

Neath Port Talbot PSB (2019) Annual Report 2019

Neath Port Talbot County Borough Council (2018) Corporate Plan 2018-2022

Neath Port Talbot County Borough Council (2018) Corporate Plan 2018-22 Annual Report: 1st April 2018 to 31st March 2019

Newport

Newport City Council (2018) Carbon Management Plan 2018-2022

Newport City Council (2020) Newport's Well-being Plan 2018-23 Annual Report 2019-20

Newport City Council (2017) Newport Corporate Plan 2017-2022

Newport City Council (2021) Regeneration, Investment & Housing Service Plan 2018-22 (2020/21)

Pembrokeshire

Pembrokeshire County Council (2020) Action Plan towards Becoming a Net Zero-Carbon Local Authority by 2030

Pembrokeshire County Council Executive Leadership Team discussion paper on climate change (and related environmental and sustainability issues)

Pembrokeshire Public Services Board: Annual Report 2019/20

Pembrokeshire Council Corporate Plan 2020-21

Powys

Powys Council. Low Carbon Delivery Plan: Headlines. Internal document 2021

Powys Council. Active Climate Change Workstreams by regional scope 2021

Powys Council Corporate Improvement Plan 2021-25

Powys Wellbeing Plan Towards 2040: Annual Report 20/21

Rhondda Cynon Taff

Rhondda Cynon Taff County Borough Council (2021) Consultation on the Draft Climate Change Strategy June 2021

Rhondda Cynon Taff County Borough Council (2021) Draft Climate Change Strategy (2021-2025) Consultation Responses – Report of the Chief Executive

Rhondda Cynon Taff County Borough Council (2021) Draft Council Tackling Climate Change Strategy 2021-2025

Rhondda Cynon Taff County Borough Council (2021) Update Report on Electric Vehicle Charging – Strategy and Implementation

Rhondda Cynon Taff County Borough Council (2021) Locations identified on Let's Talk Electric Vehicles interactive map
Rhondda Cynon Taff County Borough Council (2021) Update Report on Key Energy Generation Projects and Related Issues
Rhondda Cynon Taff County Borough Council (2021) The Queens Green Canopy Project 2021-2022
Cwm Taf Public Services Board (2019) Annual Report 2018-19

Swansea

City and County of Swansea (2020) Energy and Carbon Management Plan Framework 2020-2030
City and County of Swansea (2020) Climate Emergency Declaration Policy Review and Proposed Action
Swansea Public Services Board Annual Report 2019/20
City & County of Swansea's Corporate Plan Delivering a Successful & Sustainable Swansea 2021/22 (2021)

Torfaen

Torfaen County Borough Council (2021) Responding to The Councils Climate Emergency Declaration
Torfaen County Borough Council (2021) Decarbonisation Activity Summary
Torfaen County Borough Council (2020) Scrutiny Report Jan 2020 Local Authority Climate Emergency Declaration
Torfaen Public Services Board (2021) Annual Report 2020/21
Torfaen County Borough Council (2016) Corporate Plan 2016-2021

Vale of Glamorgan

Vale of Glamorgan (2021) Project Zero – Draft Climate Change Challenge Plan
Vale of Glamorgan Public Services Board (2020) Annual Report 2019/20
Vale of Glamorgan Corporate Plan - Working Together for a Brighter Future (2020)

Wrexham

Wrexham County Borough Council: Climate and Ecological Emergency – Our Decarbonisation Plan. Report to the Executive Board May 2021.
Wrexham County Borough Council: Climate and Ecological Emergency – Our Decarbonisation Plan. May 2021.
Wrexham Public Services Board: Annual Report 2020/21
Wrexham Council Plan 2020-23