UKERC
UK Energy Research Centre

Where Next for SMEs and Net Zero?

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Where are we now?

1. UK SMEs face multiple challenges:

   b. Exposed to energy price increases and inflation

   c. Hampered by supply chain disruption, including Brexit bureaucracy

   d. Labour and skills shortages in certain sectors

   e. On net zero, many SMEs struggle with limited knowledge and resources, and opportunities for energy savings are systematically missed.

2. However, there is increased demand for external support amongst SMEs, including a willingness to pay for expertise. In response, more actors are developing support services to SMEs, including trade associations, business networks and consultancies.

3. Public policy has historically been linked with EU funding, providing incentives such as free energy audits, advice and grants, delivered locally or regionally. Schemes rarely reach more than 1% of SMEs, and substantial funding has been used to support mature lighting (LED) technology.

4. Governance of net zero for SMEs is at a crossroads. In the context of Brexit, high energy prices and the climate crisis, there is a need to raise ambition and accelerate activity amongst the UK's 5.6m SMEs.

Where next for SMEs and net zero?

1. With increased demand from SMEs, and support offered from a range of new and existing actors, the role of government is changing. Rather than retreat, government bodies (national, regional, local) must adapt and exercise multiple modes of intervention, including 'hard levers' such as regulation.

2. Local, place-based support remains crucial for engaging SMEs on net zero, but there is a need to extend the reach of programmes and integrate sustainability across local economic development policy.

3. New entrepreneurial activity is emerging, with the potential to accelerate SMEs' progress towards net zero. This includes for-profit consultancy, innovation-led capacity building, and transformative proposals such as using open-banking protocols to unlock Scope 1 and 2 emissions reporting.

4. SMEs can contribute to climate action in a variety of ways, acting in multiple roles: consumers, enablers, adopters, citizens, and influencers.

5. SMEs role in net zero has yet to be systematically addressed in the context of just transitions. SMEs have different capabilities, levels of exposure, and characteristics, and there is a need to incorporate geographic and economic context into net zero governance.

GoZero – project summary

The Governance of SMEs for Net Zero (GoZero) project forms part of the UK Energy Research Centre programme, and runs from 2022 to 2024. It builds on research conducted for the Climate Change Committee, investigating how policy can better support SMEs in achieving net zero. GoZero expands this inquiry, examining the evolving roles of governance actors beyond local and central government, against the backdrop of Brexit, the energy price crisis, and growing incidence of extreme weather. It focuses on **five sectors and city-regions** with diverse economic profiles. We conducted **83 interviews with stakeholders** at national and local levels, and **30 interviews with SMEs**. We also gathered data from six regional business support projects running from 2016-2023, involving **1,940 SME beneficiaries** and more than **£4.1m worth of grant funding**. Insights from interviews and data analysis inform recommendations for effective governance of SMEs' journey towards net zero.

Sectors:

- Restaurants
- Hairdressers
- Construction trades
- Steel
- Horticulture

Places

- South Yorkshire
- Oxfordshire
- Belfast
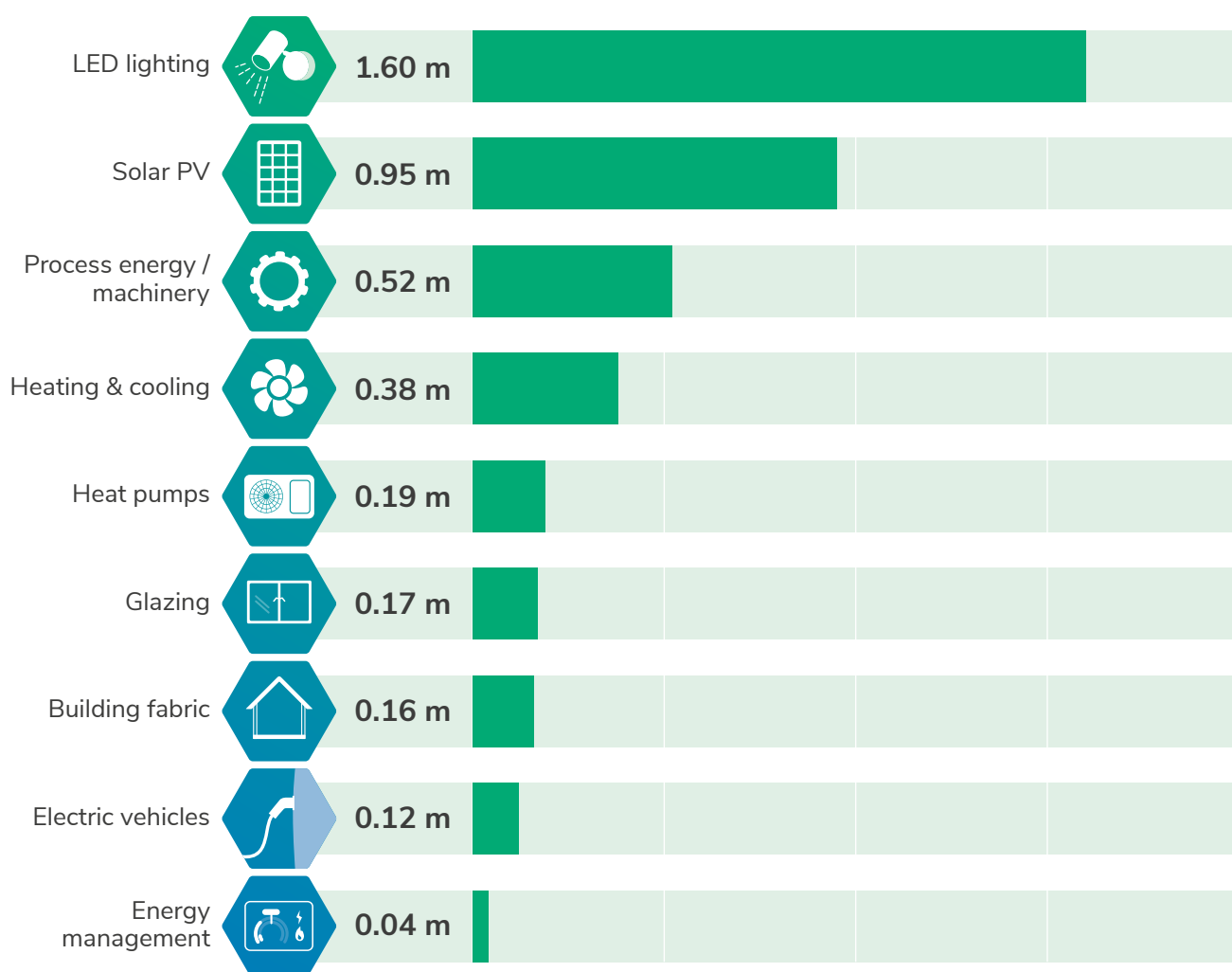- Edinburgh and South-East Scotland
- Swansea Bay

Summary findings for each of the five places and sectors are presented in two appendices, which are available to download alongside this report.

Where are we now?

Small and Medium-sized Enterprises (SMEs) are an essential part of global climate action. They contribute 13% of the world's carbon emissions and consume 50% of its commercial and industrial energy. However, they typically lag behind larger businesses and public sector organisations in ambition and action on climate change, and are exempted from many energy and climate policies.

SMEs struggle to find reliable, relevant information on pathways to achieving net zero, while policymakers find it hard to respond effectively given the sheer heterogeneity of the SME population and the relatively informal nature of organisational decision-making.[1] Existing schemes offer limited short-term incentives and technical advice, resulting in fragmented approaches to net zero support. The GoZero project examines SMEs' role in climate action, analysing emerging trends and outlining an agenda for policy and research.

Figure 1: Grant funding awarded by measure, for six EDRF projects

Measure	Funding
LED lighting	1.60 m
Solar PV	0.95 m
Process energy / machinery	0.52 m
Heating & cooling	0.38 m
Heat pumps	0.19 m
Glazing	0.17 m
Building fabric	0.16 m
Electric vehicles	0.12 m
Energy management	0.04 m

1 Blundel, R. & Hampton, S. (2021). How can SMEs contribute to Net Zero?: An evidence review. Enterprise Research Centre, Warwick.

SME decarbonisation is at a crossroads. Despite their substantial energy consumption and emissions, they often find themselves sidelined within policy frameworks both in the UK and globally. The recent energy price crisis, exacerbated by geopolitical tensions such as Russia's invasion of Ukraine, has thrust energy concerns to the forefront of SME agendas. SMEs, being smaller entities, are **disproportionately affected by energy price** shocks and supply chain disruption, leading to increased insolvencies and economic instability.

Traditionally exempted from energy and climate regulation due to their smaller carbon footprints and limited resources, SMEs also miss out on the benefits associated with regulatory compliance, such as access to energy-saving initiatives. Incentive-based policies, usually orchestrated at local levels involving regional government bodies, have been the cornerstone of SME support for energy and environmental improvements.

However, initiatives are often small-scale, piecemeal, and inconsistently evaluated across the UK's four nations, resulting in a **fragmented support landscape**. Moreover, uptake of support is low. The Enterprise Research Centre and Federation of Small Businesses (FSB) analysed 218 net zero SME support projects and found take-up of support was typically less than 1%.[2]

We gathered data from six projects involving 1,940 SME beneficiaries and more than £4.1m worth of grant funding, and found that the most common investment was the subsidy of LED lighting (39%), followed by solar photovoltaics (23%).

Nonetheless, there is evidence of renewed attention on SMEs and net zero by government, financial institutions, sector associations, and sustainability-focused consultancies. A wider range of **central government departments** are now prioritising net zero, and supporting SMEs to reduce emissions remains high on the agenda for **local authorities**, despite funding cuts.

2   ERC & FSB. (2023). The less than 1% Club: Mapping net zero support for small businesses across England. Enterprise Research Centre; Federation of Small Businesses.

New actors have emerged, such as Bankers for Net Zero and the Broadway Initiative (a coalition of trade associations), driving the SME decarbonisation agenda and raising ambition. Collaboration between government bodies, industry associations, and financial institutions has led to the emergence of initiatives like the UK Business Climate Hub and Project Perseus, aimed at simplifying and centralising support mechanisms for SMEs.

However, considerable hurdles remain, including the need for wider dissemination of sustainability messaging, overcoming financial barriers, and ensuring equitable access to support initiatives.

Figure 2: Seven principles for place-based business support

1. Context
Situating place-based approaches within wider landscape of (for example) sector-level, national and international governance

2. Going beyond
Ensuring that transformative approaches address both 'harder to reach' and 'harder to tackle' SMEs

3. Change points
Making every contact count with SMEs to engage and mobilise action, especially key moments of business change

4. Systemic solutions
Ensuring that SMEs are included as stakeholders within wider place-based decarbonisation programmes

5. Clusters
Supporting local sector-specific solutions where there is a strong presence within one industry

6. Whole place
Shared solutions at sub-local levels such as high streets or business parks

7. Coordination
Coordinating across networks and provides, including links into national and sector-level activity, and between places

Where next for SMEs and net zero?

In the context of the energy price crisis, increased incidence of extreme weather, and growing public and business concern for climate action, the *social contract for business* is undergoing fundamental change. Against this turbulent backdrop, we discuss the question of 'where next?', and outline **five key areas** which warrant policy and research attention.

Changing role of government

The role of government institutions is set to change, as the private sector plays a growing role in addressing the needs of SMEs for reducing their emissions and environmental impacts. Rather than retreat, the imperative is for governments to adopt the full range of different styles of intervention, in steering, stewarding and scaling activity in support of a rapid and inclusive transition by SMEs.

Seven principles for place-based business support

Places are a central feature of net zero governance for SMEs, and we draw on evidence from stakeholder interviews around the four UK nations to identify seven principles for net zero enterprise policy and practice. These include an appreciation of context, increasing ambition, and making every contact count. We also call for greater inclusion of SMEs in systemic solutions, capitalising on the power of business clusters, and incubating sub-local initiatives. Lastly, recognising the power of networks, we highlight the need for local actors to help join these up across places and scales.

Entrepreneurship for net zero

As net zero becomes a priority for many SMEs, so opportunities for **entrepreneurship and innovation** emerge. Our research identifies four distinct types of entrepreneurship: (1) one-to-many business support platforms, (2) systemic, technology-enabled innovators, (3) place-based capacity builders, (4) place-based eco-innovation catalysts. These emerging entrepreneurial activities have implications for the roles and responsibilities of conventional governance actors, and represent opportunities for scaling up decarbonisation activity amongst SMEs.

SMEs' multiple roles for climate action

In working towards net zero, SMEs can contribute much more than efforts to reduce their own emissions. Besides consumers of energy and resources, SMEs can enable households and other businesses to adopt low-carbon practices; and can forge the way by adopting innovative business models and technologies. As citizens, they also act as place-makers and with their collective voice, can call for greater climate policy ambition. Finally, many SMEs possess unique power to influence their customers, clients, suppliers and networks. There is a need for new research on how SMEs can be supported to enact these multiple roles for climate action.

SMEs and just transitions.

While there is a burgeoning literature on just transitions, SMEs' role in net zero has yet to be systematically addressed using a justice lens. There is a need to understand the different kinds of exposure, capabilities, and characteristics of SMEs, and to incorporate geographic and economic context into net zero policy and governance approaches.

Priorities for action

This report provides a range of recommendations for how governments, business support providers, other governance stakeholders and the research community might support SMEs in the net zero transition. What is common to all is the need for greater ambition, inclusivity and reach in these efforts.

To meet ambitious climate goals, it is necessary to develop governance arrangements which go *faster*, *broader*, and *deeper* [3] in efforts to reduce SME emissions.

Faster. In raising ambition, there is an imperative to rapidly deploy the technologies and solutions which will reduce SMEs' direct emissions, supporting their roles as *consumers* of zero-carbon inputs, *adopters* of innovations, and *enablers* of others to do the same.

Broader. Where business support policy has historically failed to reach substantial numbers of SMEs, a wider range of tools is needed, beyond one-to-one advice and grants for selected businesses.

Figure 3: SME roles for climate action

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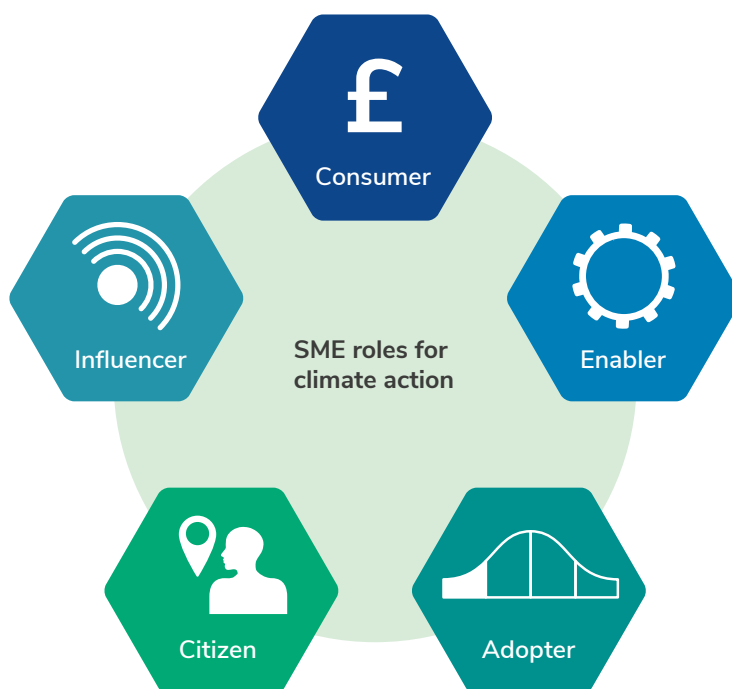
3   Andersen, A.D., Geels, F.W., Coenen, L., Hanson, J., Korsnes, M., Linnerud, K., Makitie, T., Nordholm, A., Ryghaug, M., Skjolsvold, T., Steen, M. & Wiebe, K. (2023). Faster, broader, and deeper! Suggested directions for research on net-zero transitions. Oxford Open Energy 2, oiad007. doi: **10.1093/ooenergy/oiad007**.

This includes leveraging the full breadth of policy interventions (including targeted regulation and legislation), and the power of sector associations and for-profit advisors. Yielding certain SMEs' influence can help to achieve broader support for climate action. Addressing breadth is necessary both for the speed of the transition, and to ensure that no marginalised SMEs are left behind.

Deeper. Depth refers to the need to extend the ambition of net zero support for SMEs beyond one-off investments in technologies, to include a wholesale review of business models and practices in light of the net zero goal. Values-based engagements can generate longer-term commitment on behalf of SME owner-managers, and evidence indicates that businesses which are committed to net zero retain and recruit staff, and attract investment.

As *climate citizens*, SMEs can themselves play a crucial role in demonstrating and influencing systemic change at the sub-local, regional and national scale, but they need representation which conveys their needs alongside their commitment. Here, local government, sector associations and researchers have a key role to play.

Our research also showed variance of approaches between places and nations across the UK with significant differences in the speed, breadth and depth of approaches. There is a need for stronger national frameworks for action alongside improved devolved resources that recognise context-specific challenges in different places, and address capacity challenges in 'left-behind' places where SMEs are already likely to be more vulnerable to economic change.

Photo: Zoe Schaeffer on Unsplash

1. Introduction

SMEs are an essential part of global climate action.

They contribute 13% of the world's carbon emissions and consume 50% of its commercial and industrial energy.[4]

There are approximately 5.6 million SMEs in the UK, providing 60% of private sector employment. Collectively, they consume around half of all energy from the business sector, and they typically lag behind larger businesses and public sector organisations in ambition and action on climate change.

SMEs are exempt from many business-focused energy and decarbonisation policies. Policies targeted at smaller firms tend to focus narrowly on short-term financial incentives and provision of technical advice. Most schemes are administered and delivered locally, resulting in a patchwork of approaches taken across the UK, with limited coordination and variable success.[5]

SMEs struggle to find reliable, relevant information on pathways to achieving net zero, while policymakers find it hard to respond effectively given the sheer heterogeneity of the SME population and the relatively informal nature of organisational decision-making.[1] As appetite for action grows in the business community, governance actors are failing to provide the clear guidance, strategic direction, and cross-sectoral coordination that is required.

This report addresses the question '**where next for SMEs and net zero?**', drawing on evidence from an 18-month research project: GoZero.

Insights are derived from a comprehensive review of policies and business support initiatives across England, Scotland, Northern Ireland and Wales, as well as interviews with 83 governance stakeholders acting at the national, regional and local levels and 30 interviews with SMEs.

In this report, we define SME governance for net zero as the collective activity of organising, supporting, guiding and regulating business activity with the aim of reducing greenhouse gas emissions from the SME community. Governance stakeholders therefore include a wide range of actors, from national and local governments to business support agencies, membership organisations, and industry associations.

The report has five main parts. The **next section** provides an overview of the GoZero project, and **Section 3** summarises the state of SME climate and energy policy and governance in the UK, highlighting recent trends and their implications for the role of different actors, including government. **Section 4** addresses the question of 'where next', outlining five key areas requiring policy and research attention. The **final section** provides a brief summary of these areas, and discusses implications for policy professionals, SME business support providers and the research community.

Summary findings for each of the five places and sectors are presented in two appendices, which are available to download alongside this report.

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4   OECD, 2023. Assessing greenhouse gas emissions and energy consumption in SMEs. doi: <u>10.1787/ac8e6450-en</u>

5   Fawcett, T. & Hampton, S. (2020). Why and how energy efficiency policy should address SMEs. *Energy Policy* 140, 111337.

2. The GoZero Project

Governance of SMEs for Net Zero (GoZero) forms part of the UK Energy Research Centre progamme, running from September 2022 to April 2024.

It follows a short project commissioned by the Climate Change Committee in 2021 titled 'How can policy better support SMEs in the pathway to net zero?', led by the Energy Saving Trust.[6]

GoZero expands on this question to investigate the changing role of all governance actors (besides local and central government), and to provide rigorous academic analysis on what good governance looks like for UK SMEs, after Brexit and the energy price crisis of 2022-23. We do so by focusing on governance activity across five places and five sectors.

The sectors were chosen to include primary, manufacturing and service industries, and a diversity of energy end-use practices. Regulatory and governance arrangements vary, and whereas some sectors (construction, hairdressers) are dominated by SMEs, others (steel, restaurants) are represented by powerful voices from larger corporations.

For the place-based studies, we selected a series of city-regions with distinctive approaches to SME governance, and which are comprised of different economic strengths and challenges:

- Edinburgh and South-East Scotland
- Swansea Bay, Wales
- Belfast City Region, Northern Ireland
- Oxfordshire, England
- South Yorkshire Mayoral Combined Authority area, England

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6   Weatherall, D., Wilkinson-Dix, J., Bill, E., Wilkinson, T., Blundel, R., Hampton, S. & Horne, S. (2022). **How can policy better support SMEs in the pathway to Net Zero?** A report to the Climate Change Committee.

Data and insights

We collected data across four key areas. Firstly, we conducted a **policy mapping** exercise, reviewing major strategies, plans and policies relating to SMEs and net zero across the four UK nations.

Second, a total of **83 interviews with governance stakeholders** were conducted for the study. These included selected representatives from each sector and place, as well as bodies acting at the national (UK) level. These included policymakers from central, devolved and local government; industry association representatives; business support providers; sustainability consultants; and academics. A further **30 interviews were conducted with SME owner-managers** from the five sectors. Interviews focused on the challenges faced by SMEs in aiming to reduce emissions, as well as the role of different governance actors and types of policy and other interventions.

Additionally, data were collected from **six local and regional projects offering energy efficiency audits and match-funded grants** to SMEs from 2016 to 2023. These provided insights into the use of public money for net zero business support.

Figure 4: SME sectors featured in GoZero

3. Where are we now?

SME decarbonisation is at a crossroads.

Despite their major contribution to energy use and greenhouse gas emissions, SMEs have been largely neglected by energy and climate policy in the UK and elsewhere.[1]

Now, as climate change has risen up the agenda of governments and businesses, there is increasing acknowledgement that businesses of *all sizes* must be included in the energy transition.[7]

The energy price crisis, linked to Russia's invasion of Ukraine, has also forced business leaders to prioritise energy issues. SMEs, who pay on average more for unit costs of energy (Figure 5) are less resilient to price shocks than larger businesses, and in late 2022, the rate of company insolvencies reached the highest point since the 2008-9 financial crisis.[8]

Figure 5: Non-domestic energy prices (DESNZ, 2023)

Average gas prices paid by businesses
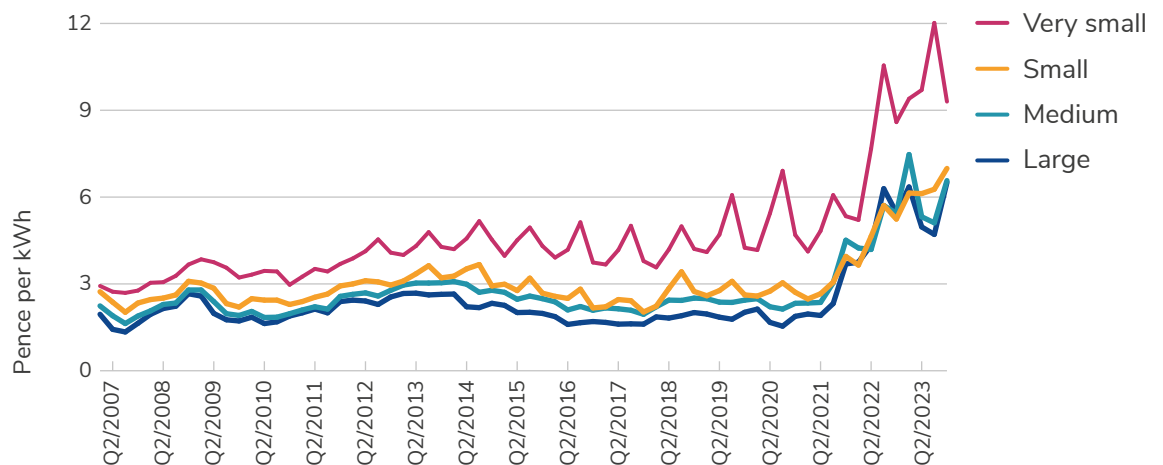
Average electricity prices paid by businesses
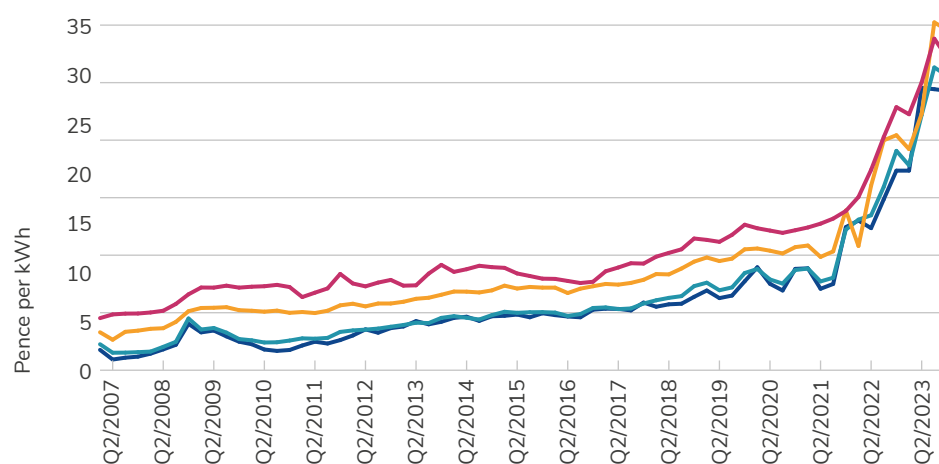
7   Skidmore, C. (2022). Mission Zero: Independent Review of Net Zero.

8   Sweney. M. (2022). Company insolvencies hit 13-year high in England and Wales.

Eco-innovation and emissions: an important distinction

Much energy and climate policy associated with SMEs is focused on the role of start-ups and entrepreneurs in developing innovative products and services which may help to accelerate the transition to net zero.

In this report, we focus primarily on policy and governance as they relate to the energy consumption and associated emissions of 5.6m SMEs. This policy area tends to attract less attention and investment.

SMEs are typically **exempted from regulation** due to their smaller carbon footprints, heterogeneity, more limited resources, and reduced regulatory compliance in comparison to larger corporations. Yet this means they also miss out on the opportunities for energy savings associated with regulatory compliance, and there remain significant opportunities to increase energy efficiency and reduce emissions by SMEs.[6]

Incentive-based policies are preferred, and are usually organised and delivered at a local level involving local and regional government. For the last three decades, SME business support for energy and environmental improvements have been mostly funded by the European Regional Development Fund (ERDF), overseen by the UK Government's Department for Levelling Up Housing and Communities (DLUHC) and incorporated into local growth policy.

A total of £123m was awarded under England's ERDF 2014-2020 Structural Investment Programme specifically to support SME energy efficiency and decarbonisation.[9] However, design and delivery varies widely across the four UK nations, creating a complex and confusing support landscape. For instance, whereas Scotland has provided consistent support for SMEs on energy efficiency, Wales chose to invest its 2014-2020 ERDF investments in eco-innovation and community energy projects, leaving SMEs without funded support for efficiency improvements.
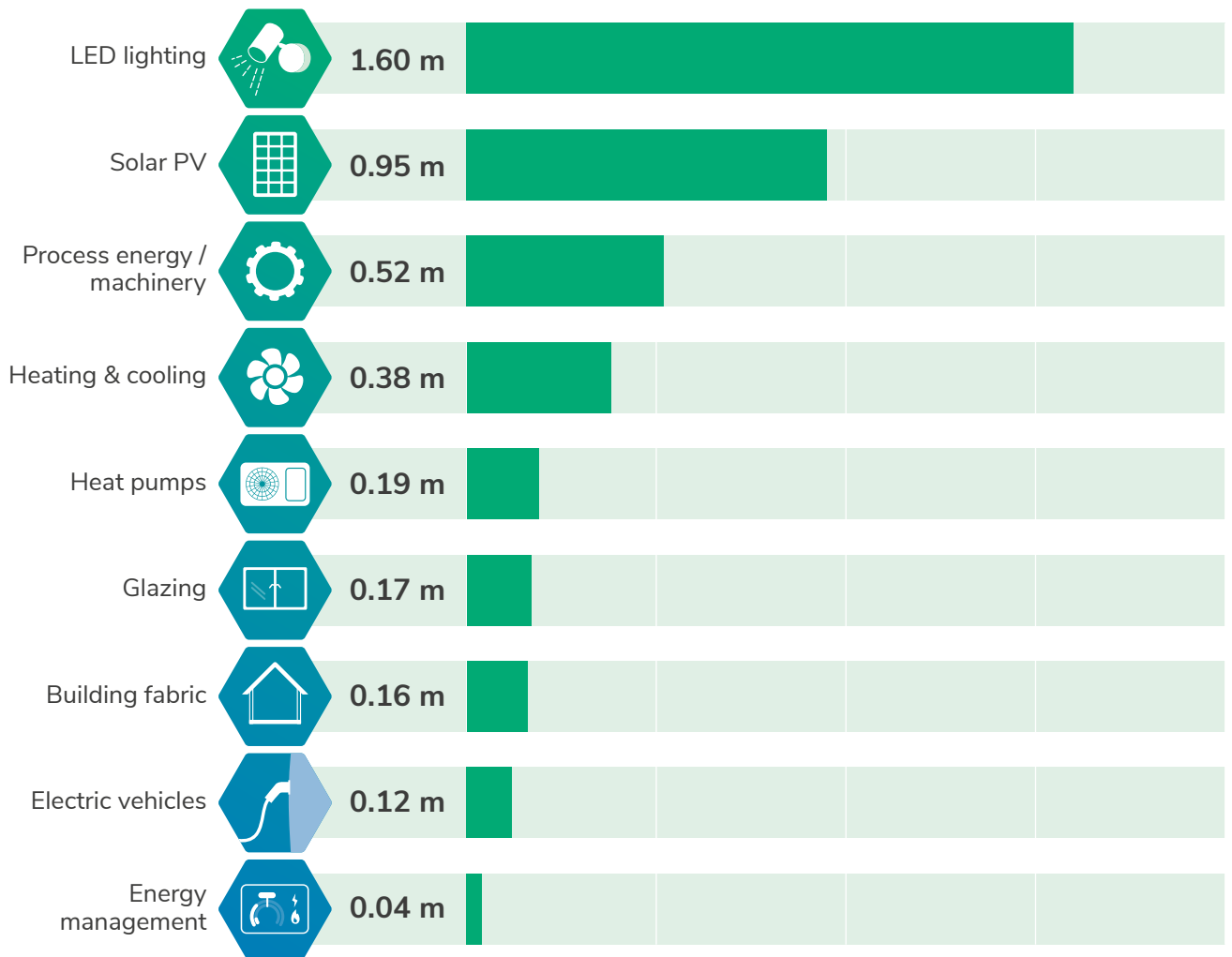
Unfortunately, environmental business support interventions are often small-scale, piecemeal, and inconsistently evaluated. Projects typically involve the free or subsidised provision of expert advice, often in the form of energy audits. Audit recipients are then able to apply for match-funded grants to undertake energy efficiency measures or install renewable heating or electricity generating technologies.

❝ 71% of small and medium sized businesses could not recommend a single web source for help on decarbonisation.❞ (FSB, 2023)

The Enterprise Research Centre and Federation of Small Businesses (FSB) analysed 218 such projects and found take-up of support was typically less than 1%.[2] Unfortunately, despite the investment of hundreds of £millions in audits and grants for low-carbon solutions, no attempt has ever been made to collate information at the national level on the kinds of recommendations made to SMEs, nor what grant-funding has been used for.

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9   ERDF and ESF List of Beneficiaries (April 2023).

Figure 6: Grant funding awarded by measure, for six EDRF projects

Measure	Value	
LED lighting	1.60 m	
Solar PV	0.95 m	
Process energy / machinery	0.52 m	
Heating & cooling	0.38 m	
Heat pumps	0.19 m	
Glazing	0.17 m	
Building fabric	0.16 m	
Electric vehicles	0.12 m	
Energy management	0.04 m	

In GoZero, we have sought to address this evidence gap by making data requests to the largest projects. We retrieved data from six local and regional projects involving 1,940 SME beneficiaries and more than £4.1m worth of grant funding, covering 2016 to 2023. Our analysis of grants awarded for 847 separate measures demonstrates that the most common investment was the subsidy of LED lighting (39%), followed by solar photovoltaics (PV) (23%). Given the short payback period associated with LEDs and the mature market that exists to service commercial buildings,[10] the extensive use of public money for these investments is questionable.

In previous work supported by UKERC, we identified further weaknesses besides poor reach and subsidising mature technologies. These include the persistent avoidance of environmental messaging in favour of short-term financial gain; the short-lived nature of many projects; and skewed reach towards growth-oriented, well-networked businesses.[4] Evidence shows that low carbon SME advisors are aware of these limitations, but struggle to implement alternative approaches such as engaging with businesses' mission and values due to the structures of governance and funding arrangements.[11]

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10 Bugbee, B. (2017). Economics of LED Lighting. In: S. Dutta Gupta (Ed.), Light Emitting Diodes for Agriculture: Smart Lighting (pp. 81–99). Springer.

11 Hampton, S. (2018). 'It's the soft stuff that's hard': Investigating the role played by low carbon small- and medium-sized enterprise advisors in sustainability transitions. *Local Economy*, 33(4), 384–404.

In the last two years, the landscape for environmental business support has become yet more complex. The Shared Prosperity Fund has partially replaced European funds since Brexit, but support for SMEs and energy or net zero via this funding stream is less generous and more geographically uneven than ERDF.

The centre of gravity for **policy at the national level is shifting**. Historically, the Department for Levelling Up, Communities and Housing (DLUHC and its previous incarnations) has been responsible for local and regional economic development policy and has overseen ERDF investments. Here, it played a largely administrative role, supporting local delivery actors and devolved governments. Since 2021, however, there has been an increase in activity at the national level, led by the Department for Energy Security and Net Zero (DESNZ), and precipitated by the Climate Change Committee's recommendations (2021), COP26 in Glasgow (2021), the Skidmore Review (2022), the Net Zero Strategy (2021) and the Energy Security Strategy (2022). DESNZ is piloting an Energy Advice Service in the West Midlands, although it paused plans to launch a digital version on the GOV.UK website. DESNZ has also worked with industry stakeholders and the SME Climate Hub to launch the UK Business Climate Hub. This website features information sorted by activity (waste, transport, renewable energy), and sector. Besides providing a valuable resource for SMEs, this initiative also signals an attempt by government to simplify the complex landscape of net zero business support. Working in partnership with industry stakeholders who had already created another platform at zerocarbonbusiness.uk, DESNZ were able to negotiate the closure of this domain and the consolidation of resources into the UK Business Climate Hub.

> **" Only 16% of SMEs responded to the energy price crisis by improving energy efficiency or installing onsite electricity generation. 46% said they were forced to raise their prices." (FSB, 2023)[12]**

While DESNZ is the logical centre for climate governance, net zero is also high on the agenda for other central government departments. As part of an expert 'horizon scanning' exercise hosted by the Enterprise Research Centre in September 2023, the Department of Business and Trade identified net zero as the top priority for SMEs. The Department for Culture, Media and Sport has launched a £25m Energy Efficiency Service targeted at voluntary, charitable and social enterprises (VCSEs) to address both the cost of living crisis and climate goals, demonstrating the complex and wide-ranging areas for SME support.

Meanwhile, many **more actors have become actively involved** in the governance of SME decarbonisation. All of the 'Big Five' business representative organisations: *FSB*, *Chambers of Commerce*, *Institute of Directors* (IoD), the *Confederation of British Industry* (CBI), and *Make UK* have published reports and policy-papers on net zero. New actors have emerged too, including the *Broadway Initiative*, the *SME Climate Hub*, and the government convened *Net Zero Council*, which has set SME decarbonisation as a priority objective. Sector and industry associations have become significantly more active on climate change in recent years. For instance, *Hospitality UK* and the *Food & Drink Federation* have been actively involved in developing resources for SME restaurants and cafes, adding to the longstanding work of the *Sustainable Restaurant Association*.

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12   FSB (2023). **UKERC Webinar on the impacts of the energy crisis on UK business**.

Major providers of energy and climate business support in the UK nations

UK-wide

UK Shared Prosperity Fund (UKSPF) – Funded by central government as central pillar of UK Government's Levelling Up Agenda, this £2.6bn fund succeeds EU structural funds. Money is distributed to places (local authorities) over three years for local investment.

Business Energy Advice Service – Pilot offering 4,000 free energy assessments to small businesses across West Midlands.

UK Business Climate Hub – Collaboration between UK Government and businesses, the hub provides net zero advice for SMEs. Part of the global SME Climate Hub

Major business representative organisations: Federation of Small Business (FSB), Confederation of British Industry (CBI), Institute of Directors (IoD), Chambers of Commerce, Make UK.

Finance industry: British Business Bank, Bankers for Net Zero

Independent organisations: Energy Saving Trust, Carbon Trust, Broadway Initiative

Regional and local programmes

England: Local Enterprise Partnerships, Local Authorities

Scotland: Scottish Government, Scottish Enterprise, Zero Waste Scotland, Business Energy Scotland (via place-based advice centres), Local Authorities

Wales: Welsh Government, Business Wales, Local Authorities

Northern Ireland: Invest NI, Enterprise NI, Local Authorities

And in horticulture, where the cut flowers sector is renowned for having high-emissions and unsustainable supply chain practices, the *Sustainable Floriculture Initiative* and *Flowers from the Farm* are gaining traction in their efforts to build a domestic market, sensitive to seasonality, biodiversity and with lower overall emissions.

The **finance sector** is also turning its attention to SME decarbonisation. Several banks have written SME specific net zero guidance,[13],[14] and the British Business Bank conducted a comprehensive review of the opportunities and challenges relating to net zero for SMEs. Bankers for Net Zero is an initiative from the financial industry which is not only working to decarbonise banks and financiers, but to decarbonise their investment portfolios. As such, it has developed a workstream focused on SMEs, and is pioneering solutions for achieving transformative change at scale (see 'Where next' section).

Whereas until recently, **sustainability advisors and consultants** focused exclusively on larger business clients, several for-profit companies have entered the market, targeting SMEs.[15] Examples include *Net Zero Now*, *Small99*, *Zellar*, and *PracticalSustainability*. Aiming to keep costs down for smaller clients, firms commonly offer the use of bespoke software based on subscription fees, with additional consultancy services available. In some cases, in lieu of providing conventional support via Economic Development or Sustainability Officers, local authorities have provided subsidies for SMEs to use the services provided by these new consultancies.

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13   Bank of Scotland (2021). <u>From now to Net Zero: A practical guide for SMEs</u>.

14   NatWest (2024). <u>Energy Help and Support Tool</u>.

15   British Business Bank (2021). <u>Small businesses and the transition to net zero</u>.

4. Where next for SMEs and net zero?

This project has highlighted five important themes that represent an agenda for research and policymaking on SMEs and net zero.

We begin with two sections on the role of government and other governance actors, firstly in the context of turbulence and change, and secondly, defining principles for place-based governance for net zero. The third subsection presents a framework for thinking more expansively about the contribution that SMEs can make in addressing climate change: we characterise five distinct roles. Fourth, we identify the growing importance of entrepreneurial activity in accelerating SMEs' pathway to net zero. Lastly, we build on growing concern for justice and equity in the energy transition by outlining a framework for applying these concepts to SMEs.

A. The role of government in a changing context

Growing demand for net zero support from SMEs is being met by an expanding number of actors and initiatives. Whereas historically defined as a market failure, energy and environmental support has been the domain of local and regional government. Now, with provision from sector associations, business representative organisations, banks and private consultancies, there is a need for government to shift the focus of its efforts. Ordinarily, as the characteristics of market failure begin to be resolved, governments may retreat. However, climate change is not a zero sum game, and there remains a need for government to act in a variety of roles.

Below is a table adapted from work conducted by the Civil Service Policy Lab[16] which identified the seven roles that government can play in shaping markets. We adapt these for the context of SMEs and net zero and identify examples of interventions that local and national governments can make, from early-stage agenda-setting, to steering mature markets. Based on our expert interviews and policy mapping we also use colours to indicate where government activity already exists (green), where it is emerging (yellow), and where policymakers may wish to consider future interventions (orange).

There has never been a more opportune time for governments to exercise their influence by consolidating their existing activities and adopting new roles to accelerate SME decarbonisation. In a recent paper, we highlight the opportunities associated with a series of intersecting contemporary political and economic challenges known as 'polycrises'.[17] These include Covid-19, the energy price crisis and extreme weather events, which have fundamentally reconfigured the *social contract* held between SMEs, society and the state. For instance, during and since the pandemic SMEs have been supported with unprecedented levels of public funding to keep them in business. Coupled with increasing public desire for climate action, this context lays the ground for governments to ask businesses to *increase* their ambitions and efforts to respond to climate change.

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16   Policy Lab (2017). Mapping service design and policy design.

17   Hampton, S., Blundel, R., Eadson, W., Northall, P. & Sugar, K. (2023). Crisis and opportunity: Transforming climate governance for SMEs. *Global Environmental Change*, 82, 102707.

Styles of government intervention for SMEs and net zero

Market and policy maturity for decarbonisation

	Early stage intervention	Framing, piloting, market forming	Scaling, mainstreaming, market building	Acting in mature markets and policy contexts
Steward	**Champion** Signal support for SME decarbonisation	**Convener** BEIS SME working group, sector councils	**Connector** Net Zero Council, UK Business Climate Hub	**Co-producer** Convene and steer stakeholders across sectors
Leader	**Agenda setter** Highlight need for action to support SMEs on net zero	**Planner** Promote green skills and signals policy direction	**Educator** Information provision e.g. UK Business Climate Hub	**Collaborator** Providing platforms for SMEs to learn, pledge, share
Customer	**Catalyst** Review and identify opportunities	**Standard setter** Support GHG reporting protocols	**Smart customer** Public procurement requirements (e.g. 06/21)	**Consumer protection** Clarify and uphold standards including offsetting
Provider	**Innovator** Showcase demonstrators and technologies	**Reformer** Consistent policy approaches and political will	**Service provider** Provides solutions via local projects	**Choice architecture** Behavioural interventions to make net zero choices easy
Funder	**Early adopter** Support low carbon solutions for SMEs	**Incentive-giver** Grants and finance for net zero measures	**Grant-maker** Provide grants for strategic technologies e,g, heat pumps	**Platformer** Scale up solutions via strategic marketing interventions
Regulator	**Voluntary codes** Steer self-regulation for SMEs via codes and standards	**Governance** Design and trial regulation without exempting SMEs	**Implementor** Implement and evaluate net zero regulation for SMEs	**Compliance** Enforce, harmonise, evaluate
Legislator	**Green papers** Strategies and plans	**White papers** Consultations and requests for evidence	**Law-maker** Pass bill through parliament targeting SMEs and net zero	**Amend rules** Evaluate and amend using statutory powers

Soft levers → *Hard levers*

Existing activity	Emerging activity	No activity

Doing so will involve experimenting with interventions historically considered too bold (see yellow and orange squares).

One example is with respect to regulatory exemptions. 'Hard levers' such as taxes, permits and market mechanisms conventionally apply exemptions for all SMEs, based on a simple size threshold.[18] However, when governments introduce or revise regulations, they should also consider targeted exemptions with obligation criteria that take industry sector, contribution (e.g. to pollution, waste), and data availability into account.

Streamlined compliance pathways can also be developed, reducing administrative burden for smaller organisations without exempting SMEs entirely.

B. Principles for place-based approaches to SMEs and net zero

Based on findings from our extensive stakeholder interviews and analysis of policy and strategy documents, we identify seven principles for guiding local and regional approaches to the governance of SMEs for net zero.

Figure 7: Seven principles for place-based business support

1. Context
Situating place-based approaches within wider landscape of (for example) sector-level, national and international governance

2. Going beyond
Ensuring that transformative approaches address both 'harder to reach' and 'harder to tackle' SMEs

3. Change points
Making every contact count with SMEs to engage and mobilise action, especially key moments of business change

4. Systemic solutions
Ensuring that SMEs are included as stakeholders within wider place-based decarbonisation programmes

5. Clusters
Supporting local sector-specific solutions where there is a strong presence within one industry

6. Whole place
Shared solutions at sub-local levels such as high streets or business parks

7. Coordination
Coordinating across networks and provides, including links into national and sector-level activity, and between places

18 The UK's definition of SMEs is based on the EU's: as organisations having less than 250 employees and an annual turnover under €50 million.

Principle 1: Seeing place within wider context

Decarbonising SMEs requires a nuanced understanding of the regional dynamics and governance structures that shape their operating environment. Across the UK, initiatives for SME decarbonisation vary significantly, reflecting the socio-economic and political contexts of different regions. For example, Scotland boasts a stable policy environment built on consensus around the need for climate action, which has facilitated SMEs' access to support and resources. In contrast, Northern Ireland faces challenges due to its fragmented political landscape, with policy and business support often divided along political lines.

Similarly, Wales has emphasised the importance of skills and education in its SME decarbonisation policy, aligning with the Well-being of Future Generations Act and focusing on the Foundational Economy. Meanwhile, England's diverse localities present varying baselines for action, with some regions, like Oxfordshire, leading the way in developing networks and attracting investment in low-carbon innovation, while others, like South Yorkshire, have a less well-developed support ecosystem.

It is crucial to recognise the *limits* to local action. Sector-level organisations, like the British Constructional Steel Association, are pivotal in supporting SME decarbonisation. They develop tailored plans, collaborate with industry bodies to influence policies, and offer specialised resources to members. Yet, challenges remain in engaging with local and regional governance structures, limiting collaboration opportunities between sector organisations and governmental bodies.

Principle 2: Going beyond – harder to reach & harder to tackle

Despite the proliferation of initiatives, many SMEs, especially harder-to-reach businesses, remain underserved. These businesses, often lacking resources and connections, are less engaged with formal business or policy networks and may face additional barriers to accessing support. Tailored outreach efforts are essential to engage with these SMEs, focusing on rural businesses, enterprises led by individuals from marginalised communities, and those not oriented towards growth.

Addressing energy and emissions data gaps is crucial for empowering SMEs to identify opportunities for savings and investment in low-carbon solutions. While financial support is essential, providing assistance with monitoring energy and emissions data can enhance SMEs' capacity to identify and act on opportunities for decarbonisation. Initiatives like Project Perseus, which is led by Bankers for Net Zero and seeks to unlock energy consumption data at scale, have the potential to revolutionise SME support (see next section on entrepreneurship).

Photo: Dylan Nolte on Unsplash

Principle 3: Change points: making every contact count

The NHS's "Making every contact count" approach ensures all staff utilise any opportunity to support patients' behaviour change towards healthier lifestyles. Similarly, in SME decarbonisation, interaction points with stakeholders and intermediaries serve as opportunities for information provision or dialogue about net zero.

Public bodies, such as local authorities, play a pivotal role in facilitating interactions with SMEs through planning processes, business rates administration, and accreditation programmes.[19] Similarly, industry-specific intermediaries, including accountants, landlords, and trade associations, can serve as trusted sources of advice and support for SMEs.

Integrating SME decarbonisation considerations into existing policy processes is essential for enhancing engagement and support. By embedding decarbonisation priorities into planning, regulatory, and procurement processes, public bodies can create incentives for SMEs to adopt sustainable practices. Moreover, fostering collaboration between different stakeholders and intermediaries can enhance the effectiveness of SME support initiatives, ensuring that SMEs receive holistic and tailored assistance.

Principle 4: Systemic solutions – SME stakeholders & influencers

Achieving meaningful decarbonisation requires systemic solutions, including place-wide infrastructure investments. SMEs have often been marginalised or ignored in policy debate and decision-making about these strategic investments. Our research revealed some examples of closer consultation with SMEs, typically mediated via trade bodies and industry associations.

However, there is a continuing perception that the SMEs are being sidelined. Moving forward, it will be essential to engage SMEs more effectively, to ensure that their voice is heard and that policy interventions take full account of their varied needs and capabilities.

SMEs can play a crucial role in driving sustainability transitions within their communities and industries, acting as influencers and change agents.

Engaging SMEs in policy implementation processes ensures that their needs and perspectives are adequately represented, fostering a more inclusive and effective approach to decarbonisation.

Photo: charlesdeluvio on Unsplash

19 Sugar, Webb & Wade (2024). Local authority engagement with small and medium-sized enterprises in energy efficiency: Lessons from the Energy Efficient Scotland programme. Environmental Policy and Governance. (Forthcoming)

One striking example of SMEs as influencers from our research is where hairdressers have been observed motivating their clients to switch to more sustainable practices, such as using shampoo bars (thereby avoiding plastic waste and harsh chemicals), and to adopting water-saving measures. This supports earlier work on the potential role that hairdressers could play in promoting more sustainable practices.[20] For smaller restaurants, influence is multi-directional. Chefs and owners respond to customer preferences, but they can also shape them by developing lower-carbon menus, carbon labelling, providing tap-water as standard, and awareness raising.

Place-based governance must consider diverse SME perspectives and their potential as change agents. But not all businesses are effective at getting their voices heard. Sustained engagement with diverse business communities is essential, recognising SMEs' unique needs and the inadequacies of existing business networks.
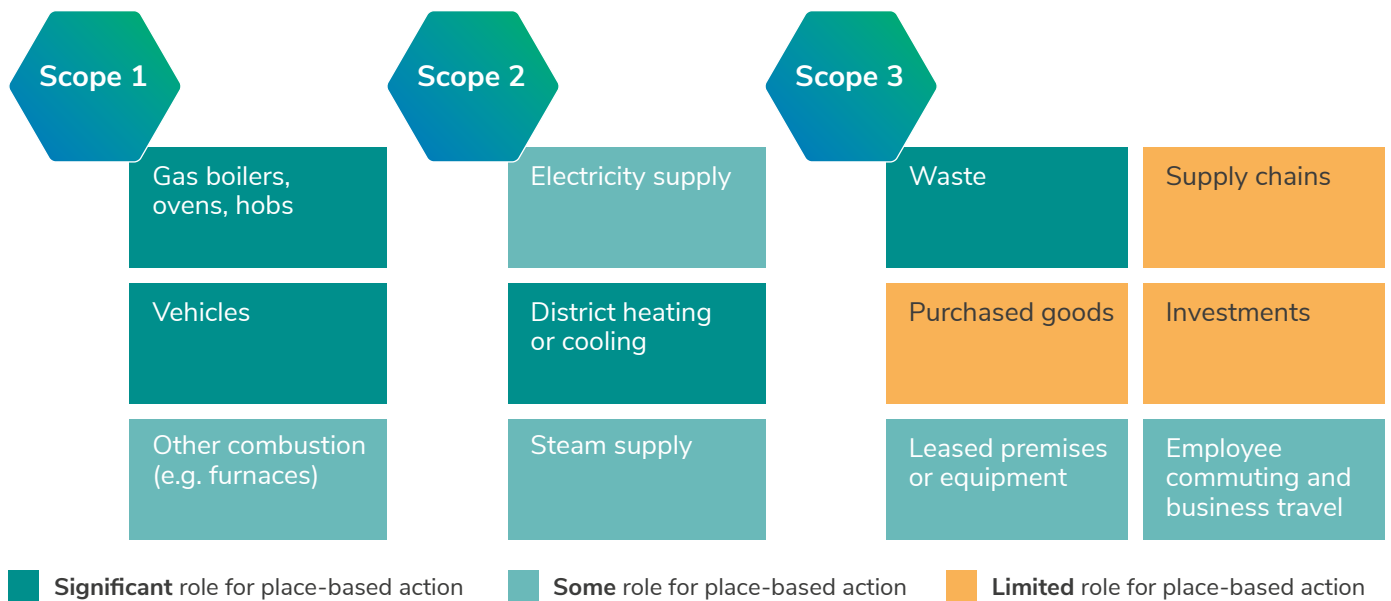
Principle 5: Collaborating with clusters

Collaborating with industry clusters provides an opportunity to tailor support to specific sectors or geographic concentrations of SMEs. Sustainable Food Places, for example, demonstrates the effectiveness of sector-based approaches in addressing complex sustainability challenges within the food industry. By harnessing sector-specific expertise and resources, SMEs can access support that meets their unique needs and circumstances.

Industry clusters offer opportunities for peer learning and knowledge exchange, facilitating the diffusion of best practices and innovations across sectors and regions. By fostering collaboration between SMEs, industry associations, and other stakeholders, industry clusters can drive innovation and accelerate progress towards decarbonisation goals.

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20 Baden, D. & Prasad, S. (2016). Applying behavioural theory to the challenge of sustainable development: using hairdressers as diffusers of more sustainable hair-care practices. *Journal of Business Ethics*, 133, 335-349.

Figure 8: Place based provision for different scopes of emissions

Scope 1	Scope 2	Scope 3	
Gas boilers, ovens, hobs	Electricity supply	Waste	Supply chains
Vehicles	District heating or cooling	Purchased goods	Investments
Other combustion (e.g. furnaces)	Steam supply	Leased premises or equipment	Employee commuting and business travel

■ **Significant** role for place-based action　　■ **Some** role for place-based action　　■ **Limited** role for place-based action

Note: emissions sources are indicative examples rather than a definitive list.

Additionally, industry clusters can serve as hubs for collective action, enabling SMEs to pool resources and leverage economies of scale to achieve shared sustainability objectives.

As a rule, the steps required to reduce the Scope 1 and 2 carbon footprints of SMEs can be effectively dealt with by place-based provision, while Scope 3 emissions are more likely to be better addressed by specialist, sector- and industry-based actors (see Figure 8)

Principle 6: Sub-local whole-place solutions

Sub-local initiatives, such as high street and business park projects, provide opportunities for collaborative action and shared learning. Green Street, in Bradford, works with businesses clustered in city centres to provide sustainability support and create new circular economy business opportunities. In a slightly different vein, Oxford City Council is experimenting with 'area-based insetting'. This initiative encourages large organisations to invest in local decarbonisation measures to 'offset' their own emissions. They are encouraging large emitters to invest in local mitigation projects, including those led by SMEs.

Sub-local initiatives offer opportunities for experimentation and innovation, enabling businesses to test new low-carbon solutions. By creating spaces for collaboration and knowledge exchange, sub-local initiatives can foster a culture of innovation and entrepreneurship, empowering SMEs.

Principle 7: Joining up networks

The landscape of SME decarbonisation remains fragmented, with a myriad of initiatives and organisations often operating in isolation. Coordinating networks at local, national, and international levels is essential for providing coherent support to SMEs and driving meaningful change. Initiatives like the South Yorkshire Sustainability Support Consortium, which brings together the region's support providers to develop shared solutions, demonstrate the potential for collaboration across sectors and organisations, creating a coherent voice and resource hub for regional action on SME sustainability.

By joining up networks and streamlining support mechanisms, policymakers and stakeholders can enhance the effectiveness of SME decarbonisation efforts, creating a more coherent and impactful approach to tackling climate change at the grassroots level. Moreover, coordination between different levels of government and sectors is critical for ensuring that SMEs receive holistic and integrated support, enabling them to navigate the complexities of decarbonisation and thrive in a low-carbon economy.

C. Entrepreneurial approaches to SME decarbonisation at scale

Over the course of the GoZero project we identified examples of innovative, entrepreneurial actors engaging in activities to accelerate SMEs' pathway to net zero. Here, we summarise our findings and develop a typology of entrepreneurship for SME decarbonisation.

Why are entrepreneurial actors important?

There are three main reasons why entrepreneurial actors have become an important part of the governance landscape:

1. Our research revealed a **patchwork of support** for SME decarbonisation across the UK, with businesses in some places and sectors being relatively well-served, while others continue to lack the help they need. For example, as previously noted, a recent study estimated that just 1% of SMEs in England are accessing net zero business support.[21]

2. There is **limited scope for the public sector** to intervene directly due to fiscal constraints, which have been further exacerbated by successive global crises in the last two decades. Political actors also face mounting political opposition to climate action, which limits their capacity to act.[22] As other studies have demonstrated, there are also particular issues in a UK context, including a lack of coordination between different parts of government.[23]

3. **New opportunities** have opened up for innovative, entrepreneurial actors to engage in this space. The growth of impact investment funds and pressure on corporate actors to treat Environmental, Social and Governance (ESG) issues more strategically[24] has been an important 'pull' factor for a variety of actors, including commercially oriented start-up ventures, sector-based bodies and voluntary and community sector organisations.

In many cases, this has given rise to a growth in **cross-sector collaborations** in which these entrepreneurial actors have engaged with other governance actors, including public sector agencies, as active participants in the design and delivery of SME decarbonisation initiatives.

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21 Enterprise Research Centre (2023). The less than 1% Club: Mapping net zero support for small businesses across England. Warwick: Enterprise Research Centre / Federation of Small Businesses.

22 Wanvik, T.I. & Haarstad, H. (2021). Populism, instability, and rupture in sustainability transformations. *Annals of the American Association of Geographers*, 111 (7), 2096-2111.

23 Sasse, T., Rutter, J., Norris, E. & Shepheard, M. (2020). Net Zero: How government can meet its climate change target. London: Institute for Government.

24 Edmans, A. (2023). The end of ESG. *Financial Management*, 52(1), 3-17.

Four types of entrepreneurial activity

The following vignettes are designed to provide insights into four contrasting types of entrepreneurial agency.

1. **One-to-many business support platforms**: An increasing number of entrepreneurial actors are marketing online and offline services to SMEs with the aim of encouraging them to engage with a decarbonisation agenda. Services may have a place or a sector-specific focus. Online platforms are typically based on a carbon calculator that SMEs can use to measure their baseline emissions, along with complementary online resources such as checklists and video case studies. We identified three different types of entrepreneurial actor involved in this area of activity:

   a. new start-up ventures, such as Net Zero Now, Zellar and Small 99;

   b. social and community-based enterprises, such as Business in the Community Northern Ireland (BITCNI); and Energy Solutions Oxfordshire (ESOx);

   c. sector-based initiatives, such as the Sustainable Restaurants Association (SRA), Zero Carbon Forum (focused on hospitality), Flowers from the Farm, and British Constructional Steelwork Association's Sustainability Charter.

2. **Systemic technology-enabled innovators**: this type can be seen as a form of policy entrepreneurship, where a group of actors are seeking to introduce a socio-technical innovation that is designed to deliver a step change in SME decarbonisation. A prime example is **Project Perseus**, which seeks to apply an enabling technology (open banking) to tackle cost, informational and capability barriers and enable carbon reporting by SMEs at scale. It is led by industry association Bankers for Net Zero, and operates through a not-for-profit venture, Icebreaker One, in collaboration with other public and private sector organisations. The **Broadway Initiative** is another example, which describes itself as 'a coalition of leading trade associations working together with government, business and the third sector to deliver the UK's net zero and environmental goals'. It was instrumental in bringing together diverse governance actors to develop the UK Business Climate Hub initiative, and providing secretariat functions for the Net Zero Council, a high-level forum for government, business and finance leaders.

Figure 9: Entrepreneurial actors and activities – a typology

Types	Distinctive characteristics	Potential to scale SME decarbonisation	Policy and practice considerations
1. One-to-many business support platforms	• Established technologies • Many new platforms established • Commercial, public and VCSE sector actors	• Replicable and scalable across places and sectors • Provision can be customised to some extent	• Proliferation of competing platforms may lead to inconsistent standards and undermine legitimacy
2. Technology-enabled systemic innovators	• New technologies • Corporate-led collaboration	• Scalable and replicable (where open source) • Disruptive technology aiming for system-level impacts	• Investment-related risks inherent in early-stage innovations
3. Place-based capacity builders	• Established technologies • Many new platforms established • Commercial (finance sector), public and VCSE actors	• Replicable and scalable across places (and sectors) • Costs of insetting can exceed offsets	• Complex collaborations require buy-in from local government and businesses • Easier to verify than overseas offsets
4. Place-based eco-innovation catalysts	• New technologies • Cross-sector collaborations • Strong local anchor institutions	• Local and global impacts • Context-dependent so not readily replicable	• Require clear and consistent policy frameworks

3. **Place-based capacity builders**. In line with traditions of place-based SME business support, entrepreneurs are increasingly taking on responsibilities conventionally held by local governments. Whereas specialist environmental business networks have struggled to survive without public grants, self-sustaining local business networks such as Oxfordshire Greentech and Cambridgeshire Cleantech are benefitting from the growth in SMEs operating in the environmental sector. Besides providing networking opportunities, these organisations offer a range of services to innovative SMEs, including training, brokering investment, and grant writing support.

Efforts are also being made to direct climate finance towards local investment. Contrasting the concept of *offsetting*, where organisations typically purchase climate credits in voluntary markets to compensate for their Scope 1 and 2 emissions, *insetting* is when companies invest in carbon reduction projects in their own value chain. In the case of **area-based insetting**, investments are focused on projects within a particular locality, bringing additional benefits to local communities such as improvements to the building stock, biodiversity enhancement and economic development. Oxford City Council and Low Carbon Hub are being funded by Innovate UK to explore how insetting can be used to help fund retrofitting projects across the city.

4. Place-based eco-innovation catalysts: This type involves an eco-innovation leader, playing a role as catalyst and institutional anchor for emerging cross-sector partnerships with a strong place-based component. The first example we have selected is the **Belfast Maritime Consortium**, which was initiated by Artemis Technologies, a marine engineering start-up that is developing a range of hydrofoil vessels with electric propulsion systems. Artemis Technologies coordinates the work of a multi-partner consortium, which spans the public and private sectors, including the port authority, local authorities, educational institutions and other SMEs. It is supported through public funding, including UKRI's Strength in Places Fund. **Energy Superhub Oxford** is another example of where a start-up, Pivot Power, brought together a consortium including other SMEs, Oxford City Council and Oxford University to demonstrate multiple energy system innovations, including energy storage, electric vehicle charging, and low carbon heating in the city.

These innovative, entrepreneurial approaches have the potential to transform the institutional landscape and promote a more rapid low carbon transition.[1, 6]

However, effective governance arrangements will be needed to guide and coordinate these activities, both to maximise their effectiveness and to avoid potential pitfalls. It will also be important to consider how they interact with other actors as part of a more holistic approach to SME decarbonisation.

D. SMEs' multiple roles for climate action

There is a need to better understand the multiple roles of SMEs in climate action. Most discussion of business and climate change has focused on the role of SMEs as sources of emissions (i.e. 'polluters') and developers of green products and services (i.e. 'innovators'). The GoZero project sought to look further into these roles to acknowledge the more varied and extensive roles that SMEs can have in mitigating climate change. Our analysis[25] finds five roles that businesses can adopt in contributing positively towards climate action.

Figure 10: SME roles for climate action

25   Bamford & Hampton (2024). Beyond industrial energy efficiency: defining the multiple roles that businesses can play for climate positive action. ECEEE Summer Proceedings.

Consumers

Collectively, SMEs have a large environmental impact through their consumption of energy and resources. SMEs can seek to reduce their individual impacts by conducting energy audits and calculating carbon footprints, and various tools and calculators have been developed to assist SMEs, for instance by *Business Energy Scotland*, *The Carbon Trust* and *Net Zero Now*. Identifying and quantifying impacts is the first step which enables SMEs to prioritise activities to work towards reducing their impacts.

Common measures recommended by sustainability consultants and energy auditors include building fabric insulation, solar panels, upgrading motors and drives to efficient models, electrification (of processes, transport), building management systems, sourcing lower-carbon inputs, staff engagement and behaviour change initiatives.

Enablers

Many SMEs are critical enablers of the net zero transition, as innovators, providers, and installers of zero carbon solutions. For example, professions such as architects, building trades, electricians and plumbing are vital 'middle actors', providing advice to householders and other businesses on the adoption of measures such as insulation, heat pumps and electric vehicle chargers. Eco-innovators additionally bring low-carbon solutions to the market, such as recycling services to eliminate landfill. SMEs also enable sharing and circular economy solutions such as car clubs and bike-sharing schemes. One example from the hairdressing sector is *Green Salon Collective*, which provides a subscription service specifically for hair salons to recycle salon waste like hair and metal.

Photo: shawnanggg on Unsplash

Adopters

SMEs play a key role as 'adopters' of critical low-carbon technologies and services, such as incorporating electric vehicles or low-carbon fleets into business models, and through the installation of renewable energy technologies and demand-side flexibility tools, such as building energy management systems. Adoption is distinct from consumption as it involves more fundamental changes to the norms and routines of business practice. Our research identified many pioneering SMEs, leading the way in adopting e-bicycles and electric vehicles, heat pumps and plastic free processes, but we found no clear pattern across place, sector or size. These pioneers can inspire change amongst peers, clients and customers.

Citizens

SMEs can utilise the power of corporate citizenship through compliance, collective action and placemaking activities. While they have limited individual capacity for advocacy or lobbying, their collective voice – via Business Representative Organisations – has significant political power. Across the UK's steel, horticulture and restaurant sector, findings revealed widespread acknowledgement of the need for more climate-related regulations, and sector bodies highlighted the importance of creating a level-playing field to enable investment certainty.

SMEs are often highly embedded within their local places, relying on the community for custom, labour and inputs, and generating social capital. For instance, SMEs operating in the hospitality sector can provide spaces for gathering and networking.

Farmers and horticultural SMEs are critical environmental stewards, while construction trades can help to reduce the impact of the built environment on nature and wildlife. SME corporate policies can extend to having social and well-being benefits as well as environmental benefits, for instance via salary sacrifice schemes to allow employees to purchase modes of active and low-carbon transport. There is also potential for spillover effects to engender pro-environmental behaviour amongst employees at home and within wider social circles.

Influencers

Businesses are social and cultural actors, creating and embedding social norms around environmental pro-behaviour and environmental responsibilities. SMEs are most likely to trust other SME owners and managers, friends and family, and their accountants for advice on running their business.[26] Business networks are thus crucial channels for exchanging experiences and advice about the adoption of low-carbon practices and technologies. Our place-based case studies revealed a variety of models for effective networking around the UK, but there remain relatively few business networks focused on energy and environmental issues (see Appendix 1).

Our research demonstrates that SMEs, such as those operating particularly in the service sector (e.g. hairdressers and restaurants) have a strong influencing role, whether this be in purchasing eco-friendly products or adapting consumer behaviours. A project called 'Mirror Talkers' promoted by the Green Salon Initiative in the UK seeks to encourage climate-conversations between stylists and clients, using QR codes on mirrors to stimulate climate discussions.[20]

26 Blackburn, R. & Jarvis, R. (2010). The role of small and medium practices in providing business support to small-and medium-sized enterprises.

Figure 11: SME roles for climate action

SME Role	Activities	Examples	Changes required for net zero	Conventional policies and interventions
Consumers	• Using energy for space heating, lighting, transport and operations (Scope 1 & 2 emissions) • Procuring and using material resources and services (Scope 3)	• Energy intensive firms: metalworks, bakeries, breweries • Resource intensive firms: builders, restaurants, farming	• Accelerate emissions reduction planning and monitoring, modify products and practices, install cleaner technologies	• Exempted from most environmental taxes and regulation • Incentives: financial, expert support, often locally organised
Influencers	• Supplying goods and services to customers • Procuring inputs • Membership of business networks and communities • Employers • Lobbyists	• Advisors (e.g. accountants, energy consultants) • Informal guides (e.g. hairdressers, food retailers)	• Advocate for decarbonisation and other sustainability practices (e.g. emissions disclosure, standards and accreditation)	• Not a focus for government policy • Initiatives often initiated by industry sector and professional associations
Enablers	• Providers of zero carbon solutions: technologies, products, services	• Heating engineers, PV installers, architects, landlords, surveyors, charities and social enterprises	• Develop and expand product and service provision	• Research & Development funding for eco-innovation • Subsidies for selected technologies
Adopters	• Integration of renewable energy, electrification of fleets and processes, demand-side flexibility	• Energy intensive firms: metalworks, bakeries, breweries • Resource intensive firms: builders, restaurants, farming	• Infrastructure provision • Upskilling of installers and engineers • Showcase early adopters	• Subsidies for selected technologies
Citizens	• Compliance, transparency & sustainable investment • Policy engagement (direct or via intermediary) • Place-making activities (local networks, nature recovery)	• Local, service-oriented SMEs, e.g. hair salons, cafes, restaurants, jewellers • Business network leadership and local advocacy	• Broader political engagement and representation • Local leadership and inclusive policymaking	• Not a focus for national policy • Initiatives often ad-hoc and place-specific

Adapted from Hampton et al. (2023) and Bamford and Hampton (2024) 6, 18

E. SMEs and just transitions

The debate surrounding SME net zero transitions has predominantly focused on a generalised concern for all SMEs, overlooking their significant heterogeneity and varying capabilities. The lens of just transition can help to address this deficit. Broader analyses of business and society tend to focus on firms' responsibilities to act to support social and environmental goals. A more nuanced framing places SMEs within sets of relations that create different relative points of justice and injustice for the business owners, the people who work for them, and their different stakeholders.

We can start with considering the three classic tenets of justice as often applied in energy and environmental justice scholarship:[27]

- **Distribution**: How are SMEs impacted by climate action compared to other societal actors? What differentiated burden do different SMEs face compared to one another?

- **Procedure**: To what extent and how are SMEs given a voice in decision-making? Which SME voices are included and which are excluded (and how)?

- **Recognition**: To what extent and how is difference (identity, characteristics, needs) understood and accepted in SME governance for net zero?

This section builds on evidence collected from the GoZero project to propose a research and policy agenda for incorporating principles of justice into the governance of SMEs for net zero. We identify five themes for considering the role of SMEs in just transitions.

Exposure

Exposure relates to the carbon and energy intensiveness of businesses, creating variable pressures to reduce emissions. Exposure is strongly associated with primary and manufacturing industries, and our research found that steel industry SMEs were facing supply chain and regulatory pressures to decarbonise – for instance through the introduction of the EU Carbon Border Adjustment Mechanism. Horticulture businesses such as tomato and flower growers faced a range of pressures due to the energy price crisis and climate impacts. For restaurants, although energy prices mattered and sector sustainability initiatives existed, exposure to regulatory or consumer pressures was less acute. While they often use significant process energy, SMEs in construction trades working at various sites often only pay for their transport fuels, so are less exposed. Governance stakeholders tended to emphasise their potential as 'enablers' of low carbon solutions rather than focusing on their own emissions. However, construction trade businesses will be required to reposition their services towards those low carbon solutions: for instance moving away from gas boiler installation to heat pumps, which require different technologies and skillsets.

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27   McCauley, D.A., Heffron, R.J., Stephan, H. & Jenkins, K. (2013). Advancing energy justice: the triumvirate of tenets. *International Energy Law Review*. 32, 107–110.

Shifting technologies require business change but also a responsibility for businesses to support workers to reskill to meet those necessary changes.

Capability and connectivity

But exposure alone does not mean vulnerability. Businesses in exposed industries have variable capabilities to change and generate opportunities. For instance, some steel SMEs we spoke to were engaged in a range of initiatives to reduce their carbon emissions, and were well connected to research institutes and policy-makers. Acting early to decarbonise represented an opportunity for competitive advantage.

The steel recycling industry is forecasting growth linked to the growth of the circular economy, but faces a range of barriers. Some parts of the sector are still characterised by informal practices and a perception among some SMEs that it is better to avoid, rather than seek to engage, policymakers.

While net zero business support policy aims to enhance SME capabilities, only a very small proportion of businesses have engaged with climate support and advice. Our stakeholder interviews confirmed that those receiving support tend to be growth-oriented businesses with strong local connections, and skewed towards professional service firms. Already marginalised businesses are less likely to receive net zero support.[2] A large proportion of SMEs exist not to grow but to survive and maintain steady incomes for owners and workers.

This group of SMEs are also more likely to be characterised by 'organisational introversion': they have small, tightly bound networks and stakeholder groups, and draw on 'taken-for-granted, internally generated' values for decision-making.[28] These SMEs tend not to be a focus of policy programmes; so face a double-disadvantage by being ignored by policy at the same time as being more vulnerable to change.

Recognising differential characteristics

Business-owner characteristics matter and are important for how we think about just transition for and with SMEs. Small firms led by people from marginalised population groups might be more vulnerable to change because of their position as outlined above, but also might be harder-to-reach because of their marginalised position. There is a need to develop different approaches to reach and support such businesses, as outlined in our focus on place-based approaches, above.

Some sectors are particularly vulnerable, such as horticulture, where 65% of business owners and workers are women.

In other sectors, there is a need to integrate skills and entrepreneurship support alongside net zero objectives. The construction sector, for instance, suffers from low diversity (90% male). Given its pivotal role in delivering retrofit solutions and zero carbon new buildings, there is a need for widespread reskilling and new approaches to training and accreditation. This transformation can open up opportunities for creating a more diverse workforce and inclusive practices.

28   Oldham, S. & Spence, L.J. (2022). A typology of small- and medium-sized supplier approaches to social responsibility. *Business Ethics, the Environment & Responsibility*, 31, 33–48. doi: **10.1111/beer.12391**

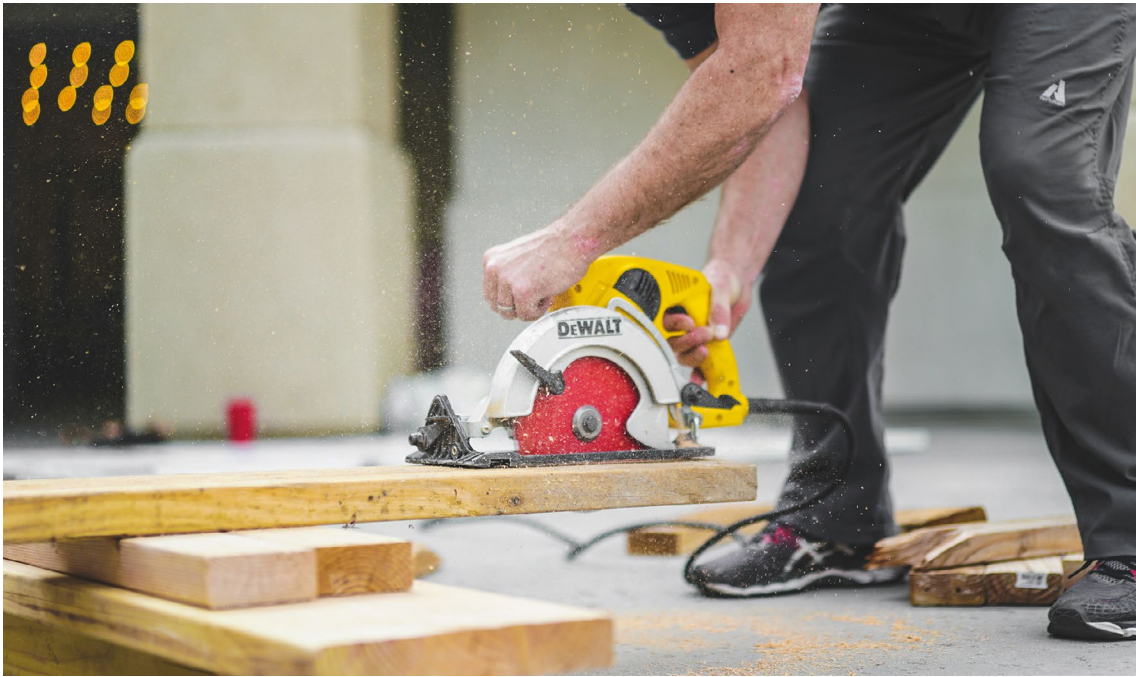## Context matters

Context, such as geographic factors also affect vulnerability. In our research, the places with more resilient economies in general (e.g. Oxfordshire, Edinburgh and Fife) also seemed to have stronger business ecosystems for low carbon transition. Existing economic challenges in places like South Yorkshire and Belfast make net zero a riskier proposition: if the business base is already exposed and vulnerable to economic change, net zero adds a potential further challenge to survival.

The composition of local economies is also important. In places dominated by high carbon or energy intensive industries, such as high-temperature manufacturing clusters, risks to that industry create knock-on risks for the wider business ecosystem. This includes SMEs operating in supply chains, or those that benefit indirectly from economic activity in that area. In South Yorkshire, steel industry turbulence – partly attributed to energy and carbon pressures – created risks for SMEs not only producing and processing steel, but in the wider economy.

Differential roles

As outlined above, SMEs can perform multiple roles in different contexts. A just transition lens helps illuminate SMEs' differential rights and responsibilities. For instance, in old industrial regions such as South Yorkshire and Swansea Bay, SMEs – as citizens – play a critical role in innovating, providing reskilling opportunities, and using technological change to diversify workplaces. As adopters of low-carbon innovations, SMEs have rights to access infrastructures such as electric vehicle charging, or electricity grid connections for solar generation. Businesses with unique influence, such as boiler installers, electricians, plumbers and hairdressers, are critical intermediaries for engaging marginalised householders such as the fuel poor, or digital disconnected older people.

These themes outline elements of a research agenda for SMEs and just transitions. There is a need to understand the different kinds of exposure, capabilities, characteristics of SMEs, and to incorporate geographic and economic context into net zero policy and governance approaches. Just transition can provide a useful framing more broadly for thinking about the position of SMEs within net zero transitions with both responsibilities and implicit rights that need to be acknowledged.

5. Summary and conclusion

This report is based on a two year research project investigating the governance of SMEs for net zero.

In the context of the energy price crisis, increased incidence of extreme weather, and growing public and business concern for climate action, the social contract for business is undergoing fundamental change. Against this turbulent backdrop, we have discussed the question of 'where next?', and outlined five key areas which warrant policy and research attention. This concluding section summarises these areas and discusses implications for key stakeholders, including the research community.

Photo: Tim Mossholder on Unsplash

Summary of 'Where next?'

The role of government institutions is set to change, as the private sector plays a growing role in addressing the needs of SMEs for reducing their emissions and environmental impacts. Rather than retreat, the imperative is for governments to adopt the full range of different styles of intervention, in steering, stewarding and scaling activity in support of a rapid and inclusive transition by SMEs. Government institutions are uniquely able to provide overarching functions, giving coherence to the governance of SMEs for net zero.

Place-based business support is a central feature of net zero governance for SMEs, and we draw on evidence from stakeholder interviews around the four UK nations to identify seven principles for net zero enterprise policy and practice.

These include: (1) an appreciation of context, (2) increasing ambition, and (3) making every contact count. We also call for (4) greater inclusion of SMEs in systemic solutions, (5) capitalising on the power of business clusters, and (6) incubating sub-local initiatives. Lastly, (7) recognising the power of networks, we highlight the need for local actors to help join these up across places and scales.

As net zero becomes a priority for many SMEs, so opportunities for **entrepreneurship and innovation** emerge. Our research identified four distinct types of entrepreneurship: (1) one-to-many business support platforms, (2) systemic, technology-enabled innovators, (3) place-based capacity builders, (4) place-based eco-innovation catalysts.

These emerging entrepreneurial activities have implications for the roles and responsibilities of conventional governance actors, and represent opportunities for scaling up decarbonisation activity amongst SMEs.

In working towards net zero, **SMEs can act in multiple roles**, contributing much more than efforts to reduce their own emissions. Besides consumers of energy and resources, SMEs can enable households and other businesses to adopt low-carbon practices; and can forge the way by adopting innovative business models and technologies. As citizens, they also act as place-makers and with their collective voice, can call for greater climate policy ambition. Finally, many SMEs possess unique power to influence their customers, clients, suppliers and networks. There is a need for new research on how SMEs can be supported to enact these multiple roles for climate action.

Lastly, we set out a research agenda for applying the concept of **just transitions** to SMEs and net zero. While there is a burgeoning literature on just transitions, SMEs' role in net zero has yet to be systematically addressed using a justice lens. There is a need to understand the different kinds of exposure, capabilities, characteristics of SMEs, and to incorporate geographic and economic context into net zero policy and governance approaches.

Implications for policy, practice and research

This report is peppered with recommendations for how governments, business support providers, other governance stakeholders and the research community might support SMEs in the net zero transition. What is common to all is the need for greater ambition, inclusivity and reach in these efforts.

The 'faster, broader, deeper' framework is instructive here.[3] In raising ambition, there is an imperative to rapidly deploy the technologies and solutions which will reduce SMEs' direct emissions, supporting their roles as consumers of zero-carbon inputs, adopters of innovations, and enablers of others to do the same.

Faster. In raising ambition, there is an imperative to rapidly deploy the technologies and solutions which will reduce SMEs' direct emissions, supporting their roles as *consumers* of zero-carbon inputs, *adopters* of innovations, and *enablers* of others to do the same.

Broader. Where business support policy has historically failed to reach substantial numbers of SMEs, a wider range of tools is needed, beyond one-to-one advice and grants for selected businesses. This includes leveraging the full breadth of policy interventions (including targeted regulation and legislation), and the power of sector associations and for-profit advisors.

Policymakers can help to secure broader support for climate action by taking the roles, responsibilities and influence of SMEs more seriously. Addressing breadth is necessary both for the speed of the transition, and to ensure that no marginalised SMEs are left behind.

Deeper. Depth refers to the need to extend the ambition of net zero support for SMEs beyond one-off investments in technologies, to include a wholesale review of business models and practices in light of the net zero goal. Values-based engagements can generate longer-term commitment on behalf of SME owner-managers, and evidence indicates that businesses which are committed to net zero retain and recruit staff, and attract investment. As *climate citizens*, SMEs can themselves play a crucial role in demonstrating and influencing systemic change at the sub-local, regional and national scale, but they need representation which conveys their needs alongside their commitment. Here, local government, sector associations and researchers have a key role to play.

Our research also showed variance of approaches between places and nations across the UK with significant differences in the speed, breadth and depth of approaches. There is a need for stronger national frameworks for action alongside improved devolved resources that recognise context-specific challenges in different places, and address capacity challenges in 'left-behind' places whose SMEs are already likely more vulnerable to economic change.

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