SMEs and Net Zero: A Personal Reflection on the Principal Challenges for Researchers and Policymakers

Keywords: business support, decarbonisation, governance, Net Zero, public policy, SMEs, values

Abstract

• **Topic:** The paper is a personal reflection on the challenges posed by the urgent need to reduce the carbon emissions arising from the activities of small and medium-sized enterprises (SMEs) in the UK and internationally. It focuses on issues facing researchers and policymakers, and on the inter-connections between these two groupings.

• **Applicability:** The paper makes a direct connection to the ISBE 2022 conference theme by bridging between the worlds of enterprise, policy and practice. It does so by drawing on the authors experiences, which include roles as a researcher, reviewer, academic / scientific advisor on recent policy reviews and reports that address SME decarbonisation, and as a member of an SME Net Zero working group convened by the UK government department responsible for business, energy and industrial strategy.

• **Aim:** The main aims are to present a critical reflection on the research, policy, and practice challenges associated with the decarbonisation of SMEs, and to promote a wider discussion of these issues, and their practical application in the UK and internationally.

• **Methodology:** The author presents a personal critical reflection that draws on several sources of evidence. These will include the following: 1. Research collaborations over the last decade, which have examined issues such as, SME perspectives on ‘greening’, the experiences of business advisors working with SMEs, and how particular types of intervention might increase the effectiveness of their engagement with SME owners and managers; 2. Reviews of related research literatures, which provide an contextualised overview of the field; 3. The authors’ personal experience, arising from recent formal and informal engagement with policymakers and practitioners who are directly involved in the governance of the Net Zero transition. The types of evidence obtained from these sources includes: qualitative analysis of interviews and ‘observant participation’ (Seim, 2021). As a working paper, the analysis remains informal, but the core arguments are fully-supported with reference to these triangulated sources.

• **Contribution:** There is an urgent need for a stronger evidence base on SME decarbonisation policy and practice. This paper seeks to spark further discussion of the issues amongst researchers, and encourage the new multidisciplinary collaborations that are needed to move this research agenda forward. It is designed to align with the interests of the ISBE Social, Environmental and Ethical Enterprise track, and to encourage links with another emerging cross-institutional grouping of researchers who are active in this field (details omitted for anonymity reasons).
• **Implications for policy**: the large-scale decarbonisation of SMEs is a key priority for public policy in the UK and beyond. More effective policymaking will contribute to achieving national and international climate change targets, while also helping to address strategic implications of today’s over-reliance upon internationally-traded hydrocarbons.

• **Implications for practice**: Decarbonisation of SMEs forms an important part of the ongoing process of mitigating climate-related risks faced by businesses and communities. The initiatives discussed in this paper also have the potential to deliver a number of co-benefits. These include a reduction in local air and water pollution, which are particular problems in countries that are more reliant on fossil-fuels, such as coal and oil, as a source of primary energy for businesses. Business-level changes such as increased energy efficiency, demand reduction and the switch to renewable and locally-generated sources, can also lower the cost of production, guard against large, unexpected price increases of the kind experienced globally following Russia’s invasion of Ukraine in 2022, and to increase the resilience of SMEs to future sources of economic and socio-political turbulence.

**Introduction**

Small and Medium-sized Enterprises (SMEs) are central, but widely-neglected actors in the Net Zero transition – or, as the authors of a recent study expressed it, ‘No Net Zero without SMEs’ (OECD, 2021). For example, SMEs in the four UK nations consume about 50% of commercial and industrial energy, but they remain exempt from many business-focused energy and decarbonisation policies. There has been a proliferation of schemes to promote decarbonisation, from a variety of actors, including banks, industry associations, universities, accreditation bodies and private consultancies. Despite this, SMEs still find it difficult to access reliable, relevant information and support on achieving Net Zero, while policymakers struggle to respond effectively due to the sheer heterogeneity of the SME population, the relatively informal nature of firm-level decision-making, and many other factors (OECD, 2021; Blundel and Hampton, 2021a). In this paper, I seek to address these issues by presenting a critical reflection on the research, policy, and practice challenges associated with the decarbonisation of SMEs. In doing so, I hope to promote a wider discussion of these issues, and their practical application in the UK and internationally.

There is an extensive literature on policies to promote changes of in firm-level behaviour and business practice, in pursuit of specific policy goals such as increased rates of growth, higher profitability, or capacity for innovation of particular firms, regions or industry sectors (e.g. Love and Roper, 2015; Dabić et al., 2020; Dvouletý et al., 2021). Researchers have applied a wide range of analytical techniques and frameworks, such as ‘barriers and drivers’, to analyse these issues. However, while achieving the decarbonisation of SMEs might appear, at first sight, as ‘just another policy goal’, in practice it brings unprecedented challenges in terms of scale, scope and complexity. This working paper will reflect on these challenges, drawing on reviews of recent research evidence, along with the authors’ personal experience of engaging with SMEs owners and managers, business advisors and policymakers.

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1 The British Business Bank estimate that between 43% and 53% of UK business emissions are from SMEs, which corresponds to as much as 36% of total UK emissions (British Business Bank, 2021).
This working paper is very much a personal reflection, and I take full responsibility for any inaccuracies or apparent biases in the content. I decided to produce a sole authored working paper on this occasion in order to provide for more freedom of expression than is available in a conventional, co-authored paper. Having said that, it is important to emphasise at the outset that the paper draws on insights gained from several research collaborations that I have been engaged with over the last few years. So, while they cannot be held responsible for the contents of the paper, I wish to acknowledge at the outset that it also reflects the efforts of my colleagues, many of whom are cited at various points in what follows.

**Methodology**

My personal critical reflection draws on several sources of evidence. These will include the following: 1. Research collaborations over the last decade, which have examined issues such as, SME perspectives on ‘greening’, the experiences of business advisors working with SMEs, and how particular types of intervention might increase the effectiveness of their engagement with SME owners and managers; 2. Reviews of related research literatures, which provide an contextualised overview of the field; 3. The authors’ personal experience, arising from recent formal and informal engagement with policymakers and practitioners who are directly involved in the governance of the Net Zero transition. The types of evidence obtained from these sources includes: qualitative analysis of interviews and ‘observant participation’ (Seim, 2021). As a working paper, the analysis remains informal, but the core arguments are fully-supported with citations that reference these triangulated sources.

**Creating research evidence and developing new approaches**

Some of the earliest research I conducted was with, *The Quarterly Survey of Small Business in Britain*, where we collected responses from around 1,300 SMEs combining regular respondents to our in-house online survey and a second sample from a commercial omnibus survey. Back in Quarter 2, 2011, we asked online respondents what the government could do to encourage the them to select greener options when leasing or purchasing equipment, such as solar voltaic panels and energy-efficient machinery. Some small firms remarked that they and other businesses were already choosing the most environmentally-friendly products, but (unsurprisingly, in the wake of the global financial crisis), others thought that government needed to provide financial incentives. Others suggested non-financial measures, such as mandating better information on energy consumption and running costs, or enforcing standards that all types of equipment have to meet (Blundel et al., 2011a: 18). In the following quarter, we found a range of responses to the broader idea of ‘business greening’. We found a lot of scepticism at that time, with 23% (the largest group) saying that they could see no (or at least very few) benefits, and a further 13% not responding to this question (Blundel et al., 2011b: 18). Financial constraints were an important concern – when asked about possible benefits, one respondent commented: ‘Are there any? Small firms can barely survive at the present time.’ However, we also found evidence of non-financial influences, with just under 15% of our online respondents seeing such activity as, ‘good for the environment’ and another 5% commenting that it helps to engender more socially aware and responsible attitudes. More than a decade later, it is striking how some aspects appear to have changed, while others remain entrenched. The biggest changes are in levels of awareness and engagement: a recent survey found nearly 60% of SMEs reporting ‘reasonable awareness’ of
key Net Zero concepts, with almost half (47%) also stating that they were ready to prioritise decarbonisation (British Business Bank, 2022: 27-28). However, many obstacles remain, including those faced by business in rented properties, where the scope to initiate changes is often limited by landlords and associated contractual arrangements.

The Quarterly Survey also detected early signs of a new perspective on climate change in a special issue on ‘resilience and recovery’. At the time, we were surprised to discover that ‘extreme weather events’ was one of the most significant external threats faced by SMEs; it was ranked third after the credit crunch and market uncertainties, with some 27% of respondents stating they had posed a real threat to their business over the last five years (Blundel et al., 2013a: 9-10). Typical verbatim responses included:

• ‘Storm damage in July 2013 has caused a huge amount of assets having to be discarded - still waiting for insurance payout.’

• ‘Heavy snowfall caused road closures preventing workforce attendance and receipt and despatch of food products to customers.’

• ‘Local flooding left 100mm of water throughout our warehouse and office and led to severe disruption to the local area for traffic and business.’

Subsequent extreme weather events, including severe flooding that has been experienced in many parts of the UK over the last decade, the extended drought and the highest ever summer temperatures, recorded in July 2022, and the increased frequency of wildfires across Europe and more widely, have raised the profile of this issue, both in policy circles and amongst small business owner and the wider public.

One of the most important new strands of research in this period has developed as a consequence of supervising a doctoral student at The Open University, Sarah Williams, along with my colleague Anja Schaefer. Sarah developed a number of important insights into the personal values that SME owners and managers draw on as they seek to make sense of climate change (Williams et al., 2017; Schaefer et al., 2022). One of Sarah’s key arguments was that conventional “win-win” approaches to engaging with SMEs were too limited, because they did not draw on the wider range of more finely-grained values that she had detected in her fieldwork. We later combined some of the findings from Sarah’s research in an ESRC Impact Acceleration Account (IAA) project called Growing Greener (2017-20). This involved colleagues from the Environmental Change Institute, University of Oxford and communication specialists, Climate Outreach, who had developed a similar values-based approach to engage other ‘hard-to-reach’ groups. Growing Greener was primarily an impact project – we created a website and toolkit to help intermediaries engage more effectively with SMEs2 – but it also generated research insights that we have reported on elsewhere (Hampton et al., 2019; Hampton et al., 2022). In addition, it underlined (for me, at least), two key requirements for research that attempts to address the complex, multi-faceted challenge of SME decarbonisation. Firstly, the value of cross-disciplinary collaboration; and secondly, the benefits of engaged research, where knowledge is co-created with practitioners. Growing Greener achieved the first of these by combining specialists in several fields, including SME

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2 This free-to-access online course and toolkit, ‘Promoting Sustainability in Business’, is available on the OpenLearn Create website: https://www.open.edu/openlearncreate/course/view.php?id=3798
and energy research, business support, climate change communication and narrative workshop methods. The second was the result of a series of interactive workshops and follow-up discussions, in which our research team worked with different groups of small business advisors to co-develop the new tools.

**Reviewing the wider evidence base**

I have been involved in several reviews of research and policy in this area. The first was published in two versions, a journal article (Blundel et al. 2013b) and a shorter, more-policy focused book chapter, which was written primarily for a practitioner audience (Blundel et al., 2013b). More recently, I was scientific advisor for an extended review of SMEs and eco-innovation research, produced for the European Union’s Directorate-General (DG) Environment (Science for Environmental Policy, 2020). I have also co-authored two evidence reviews for the Enterprise Research Centre (ERC), with examine the distinct but related topics SMEs and Net Zero (Blundel and Hampton, 2021a), and Eco-innovation and green start-ups (Blundel and Hampton, 2021b). Sam Hampton and I were also academic advisors to a report on SMEs and Net Zero, for the UK’s Climate Change Committee, working with a team from the Energy Saving Trust (Wetherall et al., 2022); this combined a review of existing findings with some original research, including expert interviews and sector-based case studies. It is always interesting to critically review the available evidence, and equally challenging to condense and summarise a disparate range of outputs. My reflections, for the purposes of this paper, are probably best expressed in the concluding sections of our first ERC review:

‘Increasing ambition from SMEs for pro-environmental action has exposed significant gaps in empirical evidence, which need to be filled in order to design and implement more effective SME-specific policy; and to develop clear, relevant guidance for climate action.’  
(Blundel and Hampton, 2021a: 5-7).

We support our case by presenting a table that lists six important ‘evidence gaps’ that need to be addressed as a matter of urgency:

1. **Data:** Robust, empirical data sets at a national scale, covering energy use and emissions by business size, sector, building and occupancy type, activity, and location;
2. **Support:** The most effective models for publicly funded sustainable business support;
3. **Intermediaries:** Deployment and performance of advisors, consultants, and other agents of change;
4. **Values:** The role of personal, professional, and organisational values in greening SMEs;
5. **COVID-19:** Implications of the pandemic and post-pandemic reconstruction for SME sustainability and resilience;
6. **Networks:** The potential of green business networks and other relational approaches to effect change).

We argue that this research agenda also needs to incorporate two ‘cross-cutting’ research questions, both of which will help to ensure that policies are delivered more effectively:
• How to improve signposting, coordination and contextualisation of information and services.

• How to ensure equity, justice, and a recognition of diversity in the race to Net Zero.

Having reviewed the available evidence, we conclude that, while the ‘barriers’ and ‘drivers’ approach is well-established in research and policy arenas, it will be necessary to move beyond this traditional conceptualisation, in favour of more holistic alternatives. For similar reasons, we point to a need to transcend conventional, economics-based, 'win-win' approaches, in order to address the sheer scale of the challenge presented by SME decarbonisation and Net Zero.

Engaging with policymakers and practitioners

How can researchers in this area engage with the people who are shaping SME decarbonisation policy? From my own limited experience of preparing reports for government departments, summarising findings for policy-oriented publications, drafting REF impact case studies and discussions with other seasoned researchers, I would suggest that it’s often a slow process, which is likely to require some solid groundwork in order to be effective. In this paper, I will simply summarise a recent case, and indicate one or two lessons that I would draw from the experience.

In 2021, I was one of two researchers invited to join the SME Net Zero Working Group, organised by the UK Government’s Department for Business, Energy and Industrial Strategy (BEIS). Since then, we have attended a number of online meetings, hosted by BEIS policy officers in the department’s SME Net Zero team. Most of the other working group members are representatives of industry organisations and trade bodies, and all of them appeared to have considerable experience in decarbonisation issues in their sector. The meetings and associated discussions have acted as a platform for consultation and sharing of ideas, the initial focus being around the department’s preparations for COP 26 in Glasgow. BEIS has become more active in the field of SME decarbonisation, and development that was signalled by a consultation on SME energy use (BEIS, 2019), followed by its sponsorship of the ‘UK Business Climate Hub’ (SME Climate Hub, 2021). The Climate Hub was launched in May 2021 in advance of COP26. The working group was consulted on various aspects of the design of this online resource, which incorporates a call for SME owners and managers across the UK to sign up to the United Nations ‘Race to Zero’ commitment – the current version includes the following wording:

‘How could your business make a difference?: No matter how small your business, what industry or part of the UK you’re in, your commitment could make a real difference – to the planet, to your customers and to your running costs! Even the smallest businesses produce carbon emissions – it could be through your building, your vehicles or your suppliers. We’re asking you to take the first step on your journey, by committing to cutting those carbon emissions in half by 2030 and to reach “net zero” by 2050. Net zero means that you are putting no more carbon into the atmosphere than you are taking out of it.’ (SME Climate Hub, 2022).
The industry and trade sector representatives were clearly playing the more important role in the short-term, helping to bridge the communications gap between government and SMEs, as well as developing their own, more local, initiatives. However, as academic researchers, we were able to share some relevant research findings with the policy team, as well as applying our own knowledge and experience in relation to the draft content and messaging.

Discussion – from evidence to policy (and back) …

This paper has reported on my experiences as a researcher attempting to tackle issues surrounding SMEs and environmental sustainability over the last decade or so, with a particular focus on the challenge of reducing firm-level carbon emissions as part of a broader Net Zero strategy. I will seek to draw things together in this short section, with a few reflections on my experience and some pointers as to possible ways forward.

SMEs pose similar problems for researchers and policymakers alike – while there are many contributory factors, in many cases this can be attributed to the absolute number of discrete organisations to be addressed, and complexities arising from their geographic distribution, heterogeneity, constrained resources and (in all too many cases) relatively short lifespans. So how can we address these issues? I will conclude with some suggested practical solutions, which may point the way forward:

1. Facilitating cross-disciplinary research collaboration: Having been involved in collaborative projects in recent years, it was clear that if we could build on this by creating a wider, cross-disciplinary and multi-institution network, it could help everyone to address the challenges outlined above. In 2021, a small group of us decided that it was time to take some action on this, so we created what we have called the ‘Zero Emissions Enterprise’ (ZEE) network, a new cross-institutional grouping of academic researchers who are active in this field. Having organised two online meetings during the pandemic that attracted a surprising number of researchers, we took a chance on scheduling a face-to-face meeting in July 2022. Hosted by Sheffield Hallam, under the leadership of Prof Will Eadson of the CRESR research group, we managed to attract a wide range of researchers, including many who are at an early stage in their careers. With travel disrupted by the UK’s highest ever temperatures, the timing seemed all-too appropriate and there was a real energy about the proceedings. We also filmed interviews with participants, which will feature on the network’s newly-established website. We hope that the new network will provide an open and dynamic forum for researchers, and that it will complement the work of other networks, including ISBE’s Social, Environmental and Ethical Enterprise track. In addition, with an online presence and programme of events, our aim is that the ZEE Network will provide policymakers with a much easier route into this research community, enabling them to get access to high quality research and to engage more actively with the relevant subject specialists.

2. Promoting researcher-policymaker interaction: Over the last few years I have become increasingly aware of the value to be gained by building closer connections with policy. It is, of course, one of ISBE’s ambitions, and many researchers have very successful track records in this area. However, I think there is still considerable scope to improve on this, as it relates to SME decarbonisation. I have already mentioned some examples, such as a researcher presence at meetings of the BEIS SME Net Zero Working Group. ESRC Policy Fellowships
in government departments are another potentially effective mechanism. In terms of ways forward, I would also point to the Northern Ireland Assembly’s Knowledge Exchange Seminar Series (KESS) initiative, which has operated in conjunction with the University of Ulster, Queen’s University of Belfast (QUB) and The Open University (OU). The KESS seminars are part of a broader initiative, designed to: ‘bring [research] findings to the attention of key participants and decision-makers, including MLAs, the wider public sector and others, in a “safe space” that encourages discussion, fosters improved understanding and seeks to enable opportunities for more in-depth engagement in future.’ ³ This model may work particularly well in smaller jurisdictions, where there are already closer connections between key policy actors. However, it seems likely that a variant could be developed for wider application at a UK-level, and in other countries⁴.

**Conclusions**

There is an urgent need for a stronger evidence base on SME decarbonisation policy and practice. My hope is that this paper, and the accompanying presentation, will help to spark further discussion of the issues amongst researchers, and encourage the new multidisciplinary collaborations that are needed to move this research agenda forward.

ISBE website: [https://isbe.org.uk](https://isbe.org.uk)

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³ Further information on the KESS initiative can be found at: [https://kess.org.uk/about/](https://kess.org.uk/about/)

⁴ Our ESRC seminar series, ‘Green Innovation: Making it Work’, led by Prof David Smith, engaged a number of UK and European policymakers, including those involved in city-based initiatives (Blundel et al., 2018); the challenge is to institutionalise this kind of interaction, something that is difficult to achieve without a sustained commitment from partners in government.
References


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