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Going down the local: the challenges of place-based net zero governance

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Abstract: Place-based decarbonisation is emerging as a significant element in the UK government's net zero agenda, specifically through central government devolution deals. Such localised governance has the potential to reap social and economic benefits for communities whilst also potentially delivering on net zero goals. However, pre-existing institutional constraints and unresolved tensions remain, such as the uneven distribution of initiatives across areas and the fiscal limitations within local authorities. These could potentially exacerbate regional inequality rather than promote a just transition.

This report characterises the current governance regimes and challenges to net zero delivery in four parts of the Midlands: Coventry, Nottingham, Leicester and Staffordshire. It highlights variation in local-scale action and identifies the constraints to multi-scalar governance for net zero. It recommends cultivating policy innovation, particularly to align planning with the net zero transition and identifies the potential role of regulatory sandboxes to this end as well as community ownership.

Keywords: Net zero, place-based decarbonisation, multi-scalar governance, policy innovation, regulatory sandboxes, community ownership.

Note on the authors: see end of article.

Introduction

Place-based decarbonisation refers to reducing greenhouse gas emissions and transitioning towards a low-carbon economy at various spatial scales. This approach recognises that different places have different opportunities and challenges when it comes to reducing emissions and transitioning to renewable energy sources. Both the recent Skidmore Review[1] and Climate Change Committee[2] reports emphasised the need for place-based decarbonisation to drive ambitious local action across the UK. Place-based transitions also have the potential to offer lower-cost decarbonisation, with greater social benefits (though largely expressed by government in economic terms)[3]. The Climate Change Committee sees the importance of recognising the local challenges and enablers for action as crucial for climate action by local areas.[4] An example of how the UK government characterises local action can be seen in March 2023's *Powering Up Britain — The Net Zero Growth Plan*:

> **Local areas play an integral role in supporting the transition to net zero.** Local authorities have strong powers, assets, and responsibilities across many of the areas where emissions reductions are needed, and civil society organisations can enable communities to take collective action to accelerate the net zero transition in their neighbourhoods. Local government is also uniquely placed to attract private sector net zero investment that wouldn't otherwise be obtained; maximising the local opportunities the transition will bring, such as the growth of green jobs and skills.[5]

In this view, place-based decarbonisation is a model of decentralised governance which encourages networking between local organisations to produce incremental changes at the local scale. Local government is central to this approach by developing climate action plans and orchestrating coordinated local action between institutions and groups. This is a technocratic, depoliticised conception of the role and potential of the local scale and it can be contrasted with the more radical view of various environmental movements that seek to produce more transformational change through local action.[6] These are two archetypes for identifying the differences between the dominant government discourse on net zero and more radical projects which seek to transcend materialist, growth-centred political projects. While the latter approaches contain much that is imaginative in challenging

[1] Skidmore, C., Rt. Hon. (2023)
[2] CCC (2022)
[3] Innovate UK (2022)
[4] CCC (2020)
[5] DESNZ (2023a)
[6] de Moor, J. *et al.* (2021). See also Catney, P. & Doyle, T. (2011)

economic orthodoxy and dominant systems of production, our concern in this paper is to explore the ways in which the government-centred model is materialising on the ground. This is important because, while place-based solutions are much vaunted, there is little agreement on what institutional and leadership form this can and should take. There is hence a need to better understand the important role of governance, its uneven geographies, and the agency open to subnational governments in England in driving net zero action. We seek to examine the variegated forms of local activities emerging in different areas and assess whether current policies directed towards the net zero transition are adequate to address the overlapping and systemic dangers of climate change. This paper offers an overview of the challenge of developing a policy framework that could support a context-sensitive, place-based net zero transition.

The paper is organised into three parts. The first part offers an overview of the governance and policy context for place-based decarbonisation, focusing particularly on the existing structures, processes and policies for supporting the transition, particularly as these apply to varying geographical scales and issues of environmental justice. In the second part, we draw upon recent fieldwork which engaged with local actors from four areas of the Midlands to understand the current state of net zero governance. We conclude by exploring how our research can inform the broader net zero governance landscape and what governance system could be developed to address the challenges of multi-scale governance for net zero.

Policy context

The changing nature of governance in the UK

Alongside commitments to reduce emissions in line with their pledged Nationally Determined Contributions (NDCs), the UK has pledged to reduce emissions to net zero by 2050.[7] However, action and policy do not currently align with commitments, as evidenced by the 2022 High Court[8] ruling against the UK government for an inadequate net zero strategy with a lack of policy in place to reach its targets. In the UK, emissions come from a variety of sectors with 25 per cent of all emissions linked to energy supply, 18 per cent from business, 34 per cent from transport and 17 per cent from domestic properties.[9] To keep global warming below the critical

[7] UK Government (2019)
[8] Friends of the Earth, Client Earth, Good Law Project v Secretary of State for Business, Energy and industrial Strategy [2022]
[9] DESNZ (2023b)

threshold of 1.5 degrees Celsius,[10] rapid decarbonisation must occur. This requires different ways of working and the need for dynamic, collaborative relationships across different spatial and temporal units.[11, 12] This need for multi-scale action has long been recognised in academic debates, and it is increasingly becoming incorporated into public policy agendas. The increasing prominence of the concept of polycentricity — in both academic debates and increasingly in policy practice — is indicative of the growing recognition of the need to work across different scales, particularly the importance of local-scale experimentation with systems of governance.[13]

England offers a challenging case for place-based decarbonisation as it has one of the most centralised governance structures in the developed world.[14] Despite this growing acceptance of polycentric approaches, there remain contrasting interpretations of the role of the local scale by governments but also how different localities see their own potential role in terms of experimenting with new policies and technical innovations or being policy takers, waiting for national or regional governmental leadership. In devising place-based action, there is hence a tension between policy agendas often set in Westminster and Whitehall and locally coordinated action between actors concerned with achieving decarbonisation. Both the Climate Change Committee[15] and Skidmore Review[16] recommend that the role of local authorities as leaders in this challenge should be enhanced, due to their understanding of their 'place'. In their 2020 report on local authorities, the Climate Change Committee,[17] notes that local authorities have the capacity to influence roughly one third of local emissions (through their operational activities and other local engagement and influencing activities). However, in practice, local authorities, particularly two-tier authorities, are constrained in their legal powers with many unable to leverage action on key areas such as transport and agriculture. Hence, this limits the potential for policy innovation as local areas have limited scope for niche policy development, which could then enter mainstream policy discourse. These constraints are recognised by the Climate Change Committee, which adopts a realistic approach to local authorities as leaders, recognising local authority major budgetary constraints as a limiting factor for action and differing local powers.

[10] IPCC (2018)
[11] Leck, H. & Simon, D. (2013)
[12] CCC (2020)
[13] Ostrom, E (2012)
[14] Copus, C. *et al.* (2017)
[15] CCC (2022)
[16] Skidmore, C., Rt. Hon. (2023)
[17] CCC (2020)

To address these concerns, Westminster and Whitehall have enacted policies to devolve powers to different regions of England to potentially create more policy flexibility. By 2024, over 50 per cent of England's population is expected to be covered by a mayoral devolution deal, a significant rise from 20 per cent in 2014.[18] The Department for Levelling Up, Housing and Communities sees mayors as key strong local leaders in these devolved areas[19] and a key element of delivering on the goal of levelling. The Skidmore Review echoes this view, emphasising the importance of local leadership: 'Each community will have a different path to net zero.' Skidmore highlights major metropolitan areas such as Manchester as exemplars for achieving net zero, offering such areas as models of success which should be replicated. This devolutionary process in England has been selective and has created a complex and uneven system of multi-scalar governance.[20] The interrelationships between local actors, including local authorities, metro-mayors, and other local actors, are poorly defined and with much confusion about how much local areas can engage in policy innovation to develop place-based approaches and how their policies feed into national policy.[21] This asymmetrical process of spreading institutions and resources has not been ameliorated by the levelling-up agenda, which has the declared aim of reducing regional inequality and improving the scope for local action. A recent assessment of the levelling-up process[22] outlined several shortfalls with the new devolution deals, particularly resulting from national short-termism, funding constraints, and 'a patchwork approach to devolution which leaves local areas lacking capacity, powers, or finance'.[23] Indeed, the levelling-up funding model approach was recently criticised for creating a begging bowl culture by West Midlands Metro Mayor Andy Street,[24] based on political considerations rather than project merit. Given these constraints and the growing challenges for tackling climate change, it is expected that local areas will face many impediments to delivering the necessary rate and scale of decarbonisation action, a notion that is reflected in the broader literature.[25]

From what started as a (select) few devolution deals, most of England's population will soon be covered by some form of devolution deal. This has offered major cities a privileged position from which to begin their net zero journeys. In

[18] Institute for Government (2023)
[19] Ibid
[20] Catney, P. & Henneberry, J.M. (2016)
[21] Billing, C. *et al.* (2019)
[22] Fransham, M. *et al.* (2023: 12)
[23] Ibid
[24] Street, A. (2023)
[25] Gudde, P. *et al.* (2021)

contrast, smaller settlements are hamstrung in their scope for local action due to their generally weaker ability to lobby national government for more resources and have potentially limited ability to network with well-resourced organisations to engage in innovative approaches.[26]

The challenge of delivering a just net zero transition — where communities are not disadvantaged in pursuing action due to their location and associated major employers — is one that has received limited attention from national policymakers. By developing various institutional innovations without an overarching design, insufficient regulatory flexibility and distributing resources without a clear framework to ensure genuine levelling up, national government has created a system which lacks the coherence of federal systems and hampers the potential learning capacity of a genuinely polycentric system. As we discuss in the next section, in the context of place-based decarbonisation, some areas have benefited from this process, but the system overall has produced a bias towards larger and better-resourced areas, although there is evidence that even these areas have not been enabled to pursue an advanced form of collaborative action.

Place-based net zero

As noted above, the dominant government discourse and practice around place-based decarbonisation has been focused on the technology mix within a specific area, for example, implementing housing retrofit or diversifying the energy supply.[27] The strength of this approach is that different technical opportunities within any given place are to a degree recognised and encouraged. However, this technocratic approach does not by design ensure that justice for communities is served. Several aspects of a just energy transition are commonly cited in social science debates and are worth outlining here: 1) managing the *distributional* impacts of new energy infrastructures to ensure that the poorest are not technologically left behind; 2) ensuring *procedural* justice is adhered to so that local communities can feed into decision-making that affects them and their areas; 3) ensuring *recognition* is given to past cases of injustice and being sensitive to the importance of *restorative* justice.[28] A place-based decarbonisation process may involve introducing new technologies and ways of living into an area, curtailing particular activities, which impact the lived experience of the community in which

[26] Ibid
[27] Devine-Wright, P. (2022)
[28] See Catney *et al.* (2014), Bouzarovski, S. & Simcock, N. (2017), Heffron, R.J. & McCauley, D. (2017), Lacey-Barnacle, M. (2020)

change occurs, having significant sociocultural impacts.[29] There is also a need to recognise the inherently spatial nature of (in)justice in pursuing a just transition approach to decarbonisation strategy.[30]

An important element of managing the distribution of benefits and costs involved in the net zero transition is being sensitive to those potentially disadvantaged by the process, but there also needs to be some scrutiny about who benefits from the process and the extent to which these are locally based. For example, the owners of assets (e.g., wind farms or other renewable technology) may be based outside of the place where technology is deployed, resulting in financial outflows.[31] A further round of inequality is driven by a recursive process from previous rounds of policy action and the devolution process. Devine-Wright[32] notes that, in the dominant UK net zero policy discourse, there has been a growth in the prominence of industrial 'SuperPlaces'. A recent example in the net zero policy space is the deployment of new carbon capture utilisation and storage (CCUS) in places like industrial clusters in North East England. In short, these are areas which have become testbeds for various decarbonisation technologies, and which endow these places with the ability to draw down potential further rounds of technological development and financing. The logic of SuperPlaces is reproduced in the March Net Zero Plan with the combined authorities in Greater Manchester and the West Midlands being the first places to be given more powers over building retrofit from 2025.[33]

Injustice with SuperPlaces is not simply one of spatial justice across the country but also within these spaces. Such SuperPlaces are often top-down, government-identified spaces for policy and technological innovation. Devine-Wright[34] contests this top-down approach, emphasising the untapped capacity for the co-creation of alternative futures with communities in these areas. This top-down approach, without genuine local engagement, risks exacerbating existing social injustices by failing to understand the variability in community and industry dynamics within any given SuperPlace.[35] A broader academic literature recognises that greater community-based social learning is critical in informing local change, particularly

[29] Devine-Wright, P. (2022)
[30] Banerjee, A. & Schuitema, G. (2023)
[31] Mundaca, L., *et al.* (2018), Hanke, F. *et al.* (2021)
[32] Ibid
[33] HM Government (2023: 109)
[34] Devine-Wright, P. (2022)
[35] Garvey, A. *et al.* (2022)

for decarbonisation (see Cherry *et al.* 2022[36]). Cherry *et al*.[37] note that there is also a necessity to understand the broader social acceptability of each modality for decarbonisation across places to ensure that a place-based model is beneficial to people within that place. Given the variable local histories, local capacities and social contexts, an optimal place-based approach should not be a list of ordained policies and processes focused on technological rollout, but should recognise the need for local integration of social context and disparate policies linked with achieving place-based decarbonisation.

The lack of a clear government plan to ensure a fair process and the fair distribution of support for decarbonisation initiatives is compounded by the nature of English local government institutions which have been required to be risk averse in nature, limiting their scope for autonomous action.[38, 39] Place-based decarbonisation as a concept, therefore, faces major barriers to real-world implementation. The government's approach to place-based decarbonisation has been to produce top-down policies which are highly selective and produce recursive benefits to some areas while also, at the same time, perpetuating injustices in these places. If the government seeks a strategy on place-based decarbonisation which recognises the importance of trust and social acceptance of this process to reach the national net zero target, further work is required to improve local climate change governance and empower local areas to take action on place-specific climate issues and recognise local histories, conditions and capabilities.

Multi-scalar governance for net zero: planning for net zero?

A key insight from social science literature regarding multi-scalar governance is that no one scale can operate effectively in isolation. Rather, what is required is effective collaborative governance systems which can support the 'right-sizing' of policy action. Polycentric systems have been proposed as developing the experimental capacity and legitimacy to achieve positive environmental outcomes.[40] Although local authorities in England are set within multi-scalar regimes, they lack the level of resources and scope for local action which is associated with genuinely polycentric systems. The UK system of multi-scalar governmental relations is characterised as one governed by semi-coherent structures which unify a

[36] Cherry, C. *et al.* (2022)
[37] Ibid
[38] Harris, P.G. (2014)
[39] Traill, H. & Cumbers, A. (2022)
[40] Gillard *et al.* (2017). See also Sandström, A. *et al.* (2020)

multiplicity of actors each with their own institutional logic.[41] In the context of net zero, local authorities are largely 'policy takers', required to comply with the policies of various national ministries (e.g., the Department for Levelling Up, Housing and Local Communities, the Department for Environment, Food and Rural Affairs, the Department of Transport, and HM Treasury) which often have contradictory policy objectives. In this context, the challenge of achieving effective multi-scalar governance derives from the conflicting institutional logics which are based on predefined assumptions, values, meanings, and material practices.[42] While local authorities are in theory well placed to resolve these conflictual logics, in practice this is seldom the case.

The Climate Change Committee attributes the limited contribution to effective decarbonisation by local government to the lack of coordination between levels of governance, and their limited ability to integrate policies locally.[43] Furthermore, recent work commissioned by Innovate UK has shown that there is a 'lack of a clear mandate for local authorities' to be the key agents of local net zero delivery, indicating a worryingly low level of local readiness across different English local authorities to drive action.[44] This lack of readiness does not, however, apply to all local authorities, and calls for strong local action have come from local authorities themselves. An example of this was the collective call for climate change action when over 75 per cent of local authorities declared climate emergencies throughout 2018/19, helping increase pressure across different scales of governance for improved national legislation,[45] leading to the updating of the 2008 Climate Change Act with a target of net zero by 2050. However, despite these local authority statements of commitment to climate action, this has not translated into delivering appropriate scales of action, as few (2 per cent in 2021) had even created delivery plans two years on.[46] There are a few factors which explain this limited local leadership:

The dominance of a pro-growth ideology: The priority in local areas is to pursue conventional pro-growth policies, despite the Local Government Act 2000 declaring the need for local government to promote the social and environmental well-being of their areas.[47] These latter goals are suborned to growth-centred policies and plans, or at least are claimed to be compatible with these. Despite the growing

[41] Miörner, J. & Binz, C. (2021)
[42] Chipidza, W. & Leidner, D. (2019)
[43] CCC (2020)
[44] Innovate UK (2022)
[45] Gudde, P. *et al.* (2021)
[46] Ibid
[47] UK Government (2000)

interest in ideas associated with planning for degrowth,[48] conventional development pathways remain the standard ones for local government. Where there have been advocates for more ambitious net zero policies and plans, these voices, often from council officers, are confounded by the preferences of elected officials who reject these ideas.[49] Rather than confront the long-term imperatives of a climate emergency, elected politicians have generally preferred operating to shorter time horizons, principally related to the electoral cycle.[50] Rather than engage in challenging conversations, local authority officers have tended to look for leadership at a national level for policies which can drive local action.[51] The pro-growth ideology that currently guides England's national planning system means that the development of a pro-net-zero regime is a distant prospect.

National planning centralisation: The limited willingness to engage in climate leadership is partially conditioned by central government's dominance within multi-scalar governance. This is most clearly demonstrated with local housing targets. As councils face economic sanctions for failing to meet building targets, pressures to reach them by relaxing planning permission limit their capacity to ensure that the correct type of housing is provided for the local area, including low-carbon housing.[52] This speaks to the broader systemic tensions which exist within the planning system in England and its suitability for the net zero transition. The centralisation of the English planning system, which allows the right to appeal planning decisions to national government where local planning bodies have rejected permission for development, limits the potential of planning bodies to pursue more radical policies for the net zero agenda. Moreover, the centralised nature of regulatory frameworks limits the scope to pursue genuine local policy innovation. This can be demonstrated in the context of buildings in conservation areas. Fetzer estimates this housing is responsible for 3.2 million tonnes of avoidable emissions annually.[53] Rules on conservation areas such as the Planning (Listed Buildings and Conservation Areas) Act 1990[54] and the 2021 National Planning Policy Framework[55] set out principles for protecting such historic areas. But the relatively strict approach to regulating the deployment of retrofit to homes in conservation areas limits the scope for effective carbon savings, disadvantages

[48] Nelson, A. & Schneider, F. (eds) (2018), Xue, J. (2022), Xue, J. & Kębłowski, W. (2022)
[49] Porter, J.J. *et al.* (2015: 420)
[50] Walker, B.J. *et al.* (2015: 2254)
[51] Similarly, Laffin notes the long-term tendency to look to national ministries for policy leadership: Laffin, M. (1986).
[52] UK Parliament (2022)
[53] Fetzer, T. (2023)
[54] UK Government (1990)
[55] Ministry of Housing, Communities and Local Government (2021)

communities in these areas and inhibits local planning authorities from engaging in innovation more generally. Centralisation does not, however, reach as far as imposing an energy mandate on local planning authorities,[56] which could stimulate action where local ambition is for net zero. Hence, centralisation in the UK is consistent in reinforcing growth policies and limited in the pursuit of net zero principles.

There could be scope to produce greater policy experimentation and place-specific learning through processes to produce more local experimentation and wider regulatory change to facilitate effective net zero action. One approach which has emerged in the past decade to enable greater policy learning, innovation and regulatory change is a 'regulatory sandbox'. The idea was to promote non-traditional models of business and governance which would in ordinary circumstances not be legally permitted in the current regulatory environment, which is a highly monitored and low-risk environment.[57] By enabling greater flexibility to emerge in different places in the UK, there is the potential to impact regulatory change across different places. In the UK, the energy regulator Ofgem used sandboxing to explore the scope for regulatory flexibility on key areas such as short-term rule breaches.[58] This exercise invited innovators to trial novel products and services on the energy system which would not normally be permitted such as peer-to-peer energy trading (due to a lack of regulatory framework for buying and selling energy at a domestic level) and highlight critical regulatory constraints.[59] Such sandboxes can provide a space for experimental learning, which could then lead to new phases of policy development, resulting in faster evolution of the regulatory environment to changing demands for new technology or other aspects of the transition.[60] However, the actual efficacy of this method is still a topic of academic and practitioner discussion; a principal concern is how less sizable organisations can contribute to sandpits and not be drowned out due to their weaker capacity to engage in advanced policy discussions compared to larger organisations.

Inertia in the planning system: Addressing net zero requires rapid and effective action to reduce emissions from across key sectors. However, repeated failures to improve policy to compel key actors to reduce emissions across the lifecycle of products and services have limited rapid decarbonisation.[61] The UK land-use planning process has, in theory, some potential to set the direction for net zero at the

[56] Sugar, K. & Webb, J. (2022)
[57] Schneiders, A. (2021)
[58] Ibid
[59] Ofgem (2020)
[60] Beckstedde, E. *et al.* (2023)
[61] Hobbs, M.S. *et al.* (2023)

local scale. However, it has been criticised for its essentially reactive nature to development proposals and for not being proactive when it comes to setting ambitious environmental standards (including for carbon savings), particularly in terms of housebuilding.[62] For example, the recent changes to Part L of the Building Regulations[63] for energy-efficiency requirements for new buildings and the upcoming Future Homes Standard will help to drive decarbonisation in buildings, the potential emissions reductions remain lower than is needed for deep decarbonisation. Moreover, as previously noted, stringent planning laws greatly limit the redevelopment of existing buildings — particularly in conservation areas — to reduce their carbon impact through measures such as retrofit, EV charger installation, heat pumps and solar PV installation. But problems with land-use planning are not just evident with buildings but also with issues such as urban design to enable better environmental protection (including biodiversity net gain), addressing flash flooding, and enabling the better strategic use of the Community Infrastructure Levy for community benefit. Where there might be scope for local discretion to be exercised, this has often been rejected by planners due to feeling exposed for decisions for which they might be blamed, particularly given the centralised nature of the planning process in England, hence they use inaction to avoid blame.[64]

Limited capacity for long-term planning: Even where there might be a willingness to act, local areas lack the skills and capacity to create net zero plans, particularly in smaller areas. At a time when local authorities struggle to deliver on their statutory duties, additional non-statutory requirements, in a newly developing and often contested field such as delivering on net zero, have been side-lined or outsourced to the community without the agency to drive the necessary scale of change.[65] Financial pressures resulting from austerity alongside reduced staff capacity — a general trend towards fewer in-house planners in local authorities — have limited long-term thinking in planning, essential when considering 2050 net zero targets. Critically, in a review of planners in England, it was clear that planners were not trained or aware of key climate issues and their connection to planning beyond flooding.[66] This knowledge gap, particularly in considering how complex systems operate, has the potential to be a major barrier to deep action on climate change at a local level, particularly with a lack of central policy to improve the planning framework. Local authorities have the capacity to improve local

[62] Ibid
[63] DLUHC (2023)
[64] Catney, P. & Henneberry, J. (2012)
[65] Sugar, K. & Webb, J. (2022)
[66] Murtagh, N. *et al.* (2019)

planning with supplementary plans, mandating the developers to build to lower-carbon standards.[67] However, there are limits to what planning can achieve. Eighty per cent of the buildings that are set to be around in 2050 are already built, meaning additional work is needed to address the existing housing stock,[68] something the planning system struggles to address because it is essentially reactive to development proposals.

To summarise, there is a clear lack of concerted action for net zero. This arises from both national and local factors. First, there is a pro-growth ideology which permeates local planning policy. This is held by local politicians as much as national ones. Having conversations about alternative pathways is challenging. Second, even where there is a desire at the local level to consider such ideas, there is a lack of local autonomy that has resulted in English local authorities being followers of centralised policies rather than innovators of unique place-based policy.[69] This is supported by Goldthau and Sovacool,[70] who emphasise that in place-based decarbonisation, clear authority for leading the transition at a local level is absent, resulting in a fragmented system of multi-scalar governance.[71] Third, taking the necessary action requires both financial and staff capacity and appropriate mechanisms to influence change, particularly through the land-use planning system. However, local authorities have had funding stripped back substantially in the years since 2010, with central government grants — the main mechanism for local authority funding in the UK — decreasing by 37 per cent in real terms between 2010 and 2020.[72] Whilst many of the dominant financial and policy mechanisms to drive change are held centrally.[73] Under current circumstances, the potential for action by local authorities is likely to be limited, although the nature of the ongoing devolution process could affect this, although this could possibly increase the spatial unevenness of net zero action. To address these limitations, Localis has proposed the idea of a Local Resilience Act to impose a statutory duty on local authorities — with clear funding measures to support this mandate — to develop clear climate adaptation measures.[74] It would also rationalise policies like transportation and biodiversity policies to enable local authorities to develop novel, place-based actions. Given the enduring centralism of the UK government in

[67] Jankovic, L. *et al.* (2021)
[68] McKinsey (2021)
[69] Tingey, M. & Webb, J. (2020)
[70] Goldthau, A. & Sovacool, B.K. (2012)
[71] Hodgson, M. *et al.* (2018)
[72] Atkins G. & Hoddinott S. (2020)
[73] Cowell, R. *et al.* (2017)
[74] Localis (2022)

multi-scalar governance, it would take a significant culture change for such a policy to be implemented in full.

Research overview

This section is based on primary research carried out in late 2022 which explored the variability of place-based net zero leadership. In undertaking this research, we aimed to identify a cross-section of local governance structures within the Midlands region, including at least one city where a new devolution deal is in operation. We also sought to understand the variety of actions on climate change. To do this, we utilised the recently published Council Climate Scorecards[75] as a proxy to identify places that appeared to have variable preparedness on net zero leadership and community engagement. The Scorecards appraise the extent and effectiveness of local authority plans on climate action. Included within these scores is an evaluation of 'Governance, Development and Funding', defined as 'who will lead the plan, the net-zero targets, the council's commitment to the plan, funding and costing, council limits and monitoring, reviewing and updating the plan'.[76] However, this definition does not consider local challenges/characteristics, differences in institutional capacities, or the variable will of local political leaders. Our research attempted to offer a preliminary assessment of these aspects to examine this place-based net zero governance in practice.

From this process, four case study areas were explored: three distinct city councils (Nottingham, Leicester, and Coventry) and an area with considerable rural areas (Staffordshire). Cities have particular importance in the net zero transition as they have a disproportionate impact on global emissions relative to their population, as they are responsible for 70 per cent of carbon emissions yet house only 55 per cent of the global population.[77] Staffordshire County Council was included in our analysis to incorporate insights into a different form of local authority structure (that is, a two-tier system of the county council and borough and district councils, some of which surround Stoke-on-Trent City Council). Furthermore, the inclusion of a county area with significant rural areas (74 per cent urban population, 26 per cent rural population)[78] offered potential insights into achieving place-based net zero leadership in other areas with these characteristics. The city

[75] Council Climate Scorecards (2022)
[76] Council Climate Scorecards (2022)
[77] Huxley R. *et al.* (2021)
[78] Data from Census 2021, in Varbes (2023)

study areas scored 14, 19, and 0, respectively, out of 21 for their climate governance (noting Coventry had no plan at the time of plan appraisal), whilst Staffordshire scored 6.

In November 2022, 14 semi-structured interviews were undertaken in the three city local authorities covered. Approaches were made to both climate change portfolio holders and climate change officers (or where one was not present, to an appropriate substitute, e.g. environment, recycling, biodiversity). Representatives from Nottingham City Council and Coventry responded. Leicester City Council did not respond to the request to participate in this study. To gain further insight into these areas, mainly where no local authority participation was offered, additional interviews were undertaken with leading local stakeholders in these areas, including community groups, local businesses, membership bodies, and academic institutions. The groups were identified using a variety of local networks available online and mapping of key institutions, for example, educational institutions. In addition to local stakeholders, a further four interviews were carried out with a variety of regional actors who had a strategic overview, including the Midlands Net Zero Hub, Midlands Engine, East Midlands Chamber of Commerce and D2N2 (Nottingham and Derbyshire LEP). Following the interviews, all were transcribed, coded, and thematically organised. The material below follows the themes identified from these interviews.

A different approach to the research was adopted in Staffordshire. Due to the authors' proximity — including professional practice[79] — to the actors, policies and dynamics of the area, there was judged to be less need for capturing an overview of the governance networks. Instead, we sought to understand the extent to which communities view the net zero challenge (including the theme of the cost-of-living crisis) and the potential for collaborative forms of governance. To this end, a citizens' assembly was hosted in Spring 2022 which worked with local stakeholders and community members in North Staffordshire.

Competing priorities and partisanship

One feature noted in the interviews, and which contrasted across places, was the priority given to net zero compared to immediate welfare needs. Despite their clear differences, Leicester and Staffordshire illustrated the tensions caused by political

[79] All the authors have extensive experience as local climate educators and practitioners within Staffordshire, working with public, private and community groups to deliver change. Robinson (as chair) and Bedford sit on the Staffordshire Climate Commission, a cross-sector climate collaboration within the county.

party divergences.[80] One interviewee from Leicester noted that 'sustainable development was keeping themselves alive on a week-to-week basis rather than worrying about carbon reduction initiatives'. This emphasised that meeting basic needs was politically more important than delivering on net zero, a characteristic which was shared by stakeholders and members of the public from Staffordshire. In Staffordshire, collaboration across a two-tier authority with a unitary city council (Stoke-on-Trent) limited action as the local authorities struggled to align, given differing political priorities (particularly in relation to the urgency of climate change action), internal constraints and perceptions of public demand. Similarly, in Leicester, there were issues of cooperation and shared vision at the local scale due to differences in political control of the county and city levels of government. From our review, while there was evidence of the challenges of working across party lines, such as a case where the city council was controlled by Labour and the county by Conservatives, the challenge of collaboration also transcends partisan differences. It was clear that there were limitations to collaboration due to the contrasting perceptions of individual places and their leadership teams of what their vision of net zero is and how it should be pursued. The extent to which local areas asserted their uniqueness challenged their willingness to work across areas and scales.

As noted above, a barrier to net zero governance is the dichotomy between officers and elected officials. In Staffordshire, there was evidence of this political support gap, with officers able to see the impetus for net zero action but hampered by local politicians. Without local political support or clear national mandates or mechanisms for coordinating local action within local areas or between local areas, inertia or incremental changes are probable. Without mechanisms to encourage inter-local collaboration, including means to pool resources and produce regional and sub-regional structures for policy learning, effective joint working on regional issues such as transport will continue to be fragmented.

Local leadership: by whom and how?

Viewpoints in the areas studied varied about the nature of what constituted leadership, who should provide it and how it could be distributed. There was a disparity in local interpretations of which actor is or should be the leading body for climate action for their area. Some interviewees asserted the necessity for local-authority-led efforts as a means of swift action. This was exemplified by a Coventry interviewee who stated 'We know the science. We know the technology. We know

[80] In an America context this was seen in Bick, N. & Keele, D. (2022).

how the finance works. What's missing is leadership to drive change.' However, actors outside Coventry City Council noted that it was beginning to demonstrate dynamic and innovative leadership with increasingly nuanced methods of addressing climate change. The framing of climate action in the local area has increasingly been on using non-climate specific narratives for key issues — for example, framing energy retrofit in health terms — which could offer greater buy-in across other sectors. However, not addressing the issues of climate change directly drew criticism from climate-orientated interviewees. The challenge of local leadership was made more complex in Coventry where there was also a lack of clarity on whether the West Midlands Combined Authority or the Coventry City Council should be the local leader on net zero, highlighting the challenges but possible opportunities of attempting to initiate ambitious net zero policies across an increasingly dense institution landscape. In Newcastle-under-Lyme, a borough of Staffordshire County Council, the language used by senior politicians on net zero recognised the necessity of council-led work, although it was also recognised that the borough and the county are both poorly positioned to undertake the work unilaterally due to their lack of resources. Senior council leaders hence emphasised the importance of coordination across all scales of government to enable greater resource drawdown for local action.

In all cases, local authorities were seen as the organisation which should be leading on place-based solutions to climate change. Stakeholders within each area believed they were not leading on the issue, although there was some belief in the potential of local authorities to play more of a leading role. Regional body interviewees noted that this was likely due to a lack of local knowledge and skills to deliver on the net zero agenda, as net zero exists outside of the statutory obligations of each local authority. This led to decisions being made in many cases which were focused on only one source of emission (for example, delivering a heat decarbonisation scheme OR a transport decarbonisation scheme). In so doing, there is often a failure to recognise the potential for holistic action. Nottingham City Council recognised its potential for leading on the multiple challenges posed by net zero and we found it to be a leading model for net zero in the cases we examined. This approach to local leadership did not appear immediately and has been part of the city's long engagement with environmental matters (stretching back to the 1990s). The council has sought to take leadership in part through institutional means, by creating a variety of internal council posts directed at net zero. The breadth of the net zero challenge was recognised, and various roles were created rather than passing the action to a single position. Specifically, it created specialist roles to support particular elements of decarbonisation, such as retrofit and energy generation. But the approach in the city has been one that matches principles of

collaborative governance with members from key anchor institutions in the area 'buying in' to the need for action and hence 'de-risking' collaboration from other organisations in the local area. This hence enables a greater reach of civic actors involved in strategy and delivery for net zero. There is also a culture of engaging in active and honest dialogues between partner institutions around net zero, including a private forum to address challenges as they emerge. This offers the ability to engage in local problem-solving and to ensure that local actors are involved in the process. These local processes are supported by regional-level institutional development: the creation of a major net zero infrastructure body in the region, the Midlands Net Zero Hub, which was established in 2019 to support the delivery of decarbonisation technologies and to help with the leveraging of financial support from the public and private sectors. To date, it has been able to leverage £300 million to deliver decarbonisation projects within its geographical remit, supporting a variety of organisations and institutions to understand and take steps to decarbonise. But while these positive processes have been engaged in, issues with the planning system remain. Hence striking a balance between local innovation and national policy flexibility remains a key element of ensuring an effective net zero transition.

An additional challenge which was faced by all areas was how to act on net zero whilst ensuring there was broad public consent for actions. From this research, several modes of governance were identified as currently existing. The first approach was non-consensual decision-making. This top-down approach was seen to undermine the legitimacy of action, as public concerns and local priorities and needs of various communities and stakeholders were not adequately integrated into decision-making for net zero. This process of 'localised centralisation' (particularly by city mayors) was seen to be taking decisions away from local people, leaving them feeling a generalised disenfranchisement from political decision-making.

The second method identified was inertia,[81] as local areas did not or could not garner support for local action. Inaction was seen as the path of least resistance by local authorities. With a lack of a clear political mandate to act, political leaders felt they did not have the necessary consent to pursue ambitious net zero policies. However, this approach presents a major risk of missing the opportunities that will emerge from the green economy. Creative policies are needed to overcome potential inertia. An example of this can be seen in Coventry where messages and policies were cast in terms of other than climate change, which led to action and which produced community take-up. The strategic combining of decarbonisation goals

[81] Munck af Rosenschöld, J. *et al.* (2014)

with other issues where these could realise co-benefits for (particularly vulnerable) communities could have the potential to reduce inertia by creating demand for such actions.

The third process, particularly seen in Nottingham, was a process of 'collective leadership' on net zero, through a collaborative decision-making vehicle, the Green Partnership. The Green Partnership aims to bring together organisations from across the public and private sectors with academic institutions to co-create and advance Nottingham's green future. The Partnership acts as a forum to deliver local strategies across different sectors. The City Council has representation and actively engages in collective decision-making. In part due to such mechanisms, the council embarked on riskier projects (for example, the municipal energy company, Robin Hood Energy), as there was a recognition of the public acceptability of such projects.[82] Similarly, interviewees in Leicester noted the City Council was an active leader in the challenge of net zero, specifically noting the active travel infrastructure which had been created. However, for some local actors, there was seen to be a prioritisation of actions which were more high profile in the environment over the softer and potentially more transformative issues. The novelty of Nottingham's approach also stemmed from the local authority's desire to ensure organisations participating were held to account for their pledges (by asking organisations to review their actions annually and report to the authority). This aimed to mitigate the risk of tokenistic gestures. This collective leadership model was occasionally criticised due to feelings that power should be more distributed and that communities should be further engaged to create holistic local plans. In Staffordshire, the recently established Climate Commission is looking to replicate this collective-governance-style mechanism.

Net zero communication

While there were various net zero action initiatives being undertaken across the areas, there was a general lack of communication between those actions and the broader population. Notably, the language of net zero was not seen as politically acceptable to communicate with the population unless there was the perception of

[82] Our research offers a snapshot of action undertaken in 2022, but in trying to explain why areas like Nottingham or Leicester have adopted particular approaches to environmental matters, it is clear that the policy inheritance of past decades matters. Leicester, for example, has been considered an environmental leader for decades and hence wants to retain this reputation. Similar consciousness of past actions and reputation played into the decisions of Nottingham, the city where the Nottingham Declaration was agreed in 2000.

wholescale local acceptance.[83] Furthermore, challenges existed in communicating the complexity of the large-scale and holistic changes necessary across all sectors of the economy. This generally led to a piecemeal approach where a single policy sector was identified as the locus for decarbonisation, for example, transport decarbonisation through cycle networks. Critically, there was a major limit on the level of climate risk communicated within the local authority and externally to other community actors, as many interviewees did not fully grasp the level of risk that climate change presented. Nottingham was working to overcome this through its Carbon-Neutral Nottingham 2028 (CN28) programme, a strategy body which engages in active communication campaigns, for example, adding signage to the electric taxi ranks to explain why they were in place and the benefits to both people and the climate.

Discussion

Who owns climate action?

Across the study areas, in the absence of a clear framework to support action, local actors did not know whether the local authorities could lead on the net zero transition. Outside the local scale, regional actors lacked clarity on who was the key contact and driver of action within each local authority. In many cases, this resulted in inertia, blame avoidance or deflection as areas attributed responsibility for leadership across different layers of governance rather than owning action. This was clearly highlighted by the Citizens Assembly model employed in Staffordshire. This model invited a cross-section of local people to share their thoughts and insights on decarbonisation solutions within the area. The work was supported by local experts and the local authority. There was a divergence of views regarding who should own follow-up action on climate change, with citizens calling for greater support from local authorities to deliver place-based solutions and local authorities asking for greater citizen engagement and further views to legitimise any action taken. This highlights the unresolved tensions in providing leadership, noting the lack of clear systematic and structural interconnection between multiple layers of governance from individuals in the community and local government. The horizontal and vertical scales of governance need greater clarity, coordination and consistency,[84] a general and ongoing challenge to multi-scalar governance in

[83] Simcock, N. *et al.* (2014)
[84] Di Gregorio, M. *et al.* (2019)

England. Increasing institutional innovation and density at various scales — for example, climate commissions — is necessary, but it also presents considerable transaction costs.[85] This challenge of coordination for net zero was recognised with the Climate Change Committee's Local Authority report[86] which notes 'the onus is on local authorities to work their course based on piecemeal policy and communications from Government'. Three years on from their report, our work indicates that the issues are yet to be resolved.

Planning for net zero

As discussed above, the planning system is a barrier to achieving net zero governance, but it is also an essential part of a successful transition.[87] Our interviews showed concerns about the current nature of the planning system, but there was also limited articulation by interviewees about the role planning could play in shaping alternative energy pathways. This lack of articulation of planning's potential is potentially reflective of its current shortcomings with failings in the planning process leading to considerable delays in the deployment of low-carbon technology. This is recognised in the Skidmore Review, noting that such delays and complications limit local action and ambition.

Our interview data suggest that the failure of planning is entwined with the failure of central government to provide a framework to support local net zero action. As discussed earlier, the lack of a clear national framework to support local leadership and innovation is a clear limit on action. This is clearly exemplified by one planner in Staffordshire who noted an infinite regress whereby action is not taken as they are waiting for a policy steer from central government and central government fails to act due to limited collective lobbying on the issue by local actors.

Therefore, a greater emphasis should be placed on upskilling and training planners to recognise their role in enabling, advising and investing in energy system futures within their locality.[88] Furthermore, training on the intersection between planning and climate will be needed to increase resilience to climate shocks — by encouraging planners to be aware of the likely implications of a warming world on their locality — and the critical role of planning in the net zero transition. Moreover, increased local knowledge has the potential to reduce deficits and improve local

[85] Torfing, J. *et al.* (2012*)*
[86] CCC (2020)
[87] Davoudi, S. (2013)
[88] Gudde, P. *et al*. (2021), Sudmant, A. *et al.* (2022)

capacity to support decision-making for local plans, by helping to shape local plans which are conducive to climate action or by helping local authorities develop place-based supplementary planning documents. Such action also has the potential to increase mobilisation at the local scale to improve policy frameworks.

From this research, Nottingham stood out as having adopted a different model of local governance from other parts of England.[89] Using a collaborative approach has the potential to mitigate risk within decision-making, by utilising a clear framework to facilitate a multitude of semi-autonomous actors' engagement with complex issues.[90] Nottingham has more effectively utilised this approach than other areas studied with the development and continued operation of the Nottingham Green Partnership. The partnership has invited a variety of actors into the decision-making arena, creating shared ownership of net zero as an issue and allowing stakeholders to positively engage with the necessary action, whilst continuing to act as a central point of leadership. Nottingham's interpretation of what leadership is and the need for collective governance to act on environmental issues within the broader social context of the area has played a major role in delivering on net zero. This approach has the potential to develop synergies between different actors in contrast to a unilateral/top-down approach to governance which can limit collaborative action on climate change and contrasts.[91, 92] Our research indicates that place-based local collaborative leadership is an important dimension to ensure a just transition (recognising the procedural and recognitional elements). A dialogic approach can potentially ensure that there is a flow of information and knowledge between actors at the local scale and better scales, particularly mitigating the harmful impacts of the transition of particularly vulnerable groups. It can also help with the distributional impacts of the transition, ensuring that local communities could benefit from the deployment and installation of technologies. A collaborative approach has the potential to reimagine community consent for projects by centring them in the heart of local decision-making. This builds on previous work noting the need for intermediary bodies for sustainability transitions — bodies independent of government with potentially greater trust, hence able to reach broader social groups — to be supported in their early stages, to build capacity, knowledge and greater institutional support.[93, 94]

[89] Ibid; see also Wade, F. *et al.* (2022)
[90] Carlisle, K. & Gruby, R.L. (2019)
[91] Ostrom, E. (1990)
[92] Underdal, A. (2010)
[93] Hambleton, R. (2014)
[94] Kivimaa, P. *et al.* (2019)

Planning regulatory sandboxes

Although there were divergences in the level of success in leading climate action at a local level, there were shared frustrations regarding structural constraints. These include the lack of devolved power, planning regulations and finance to support action. To begin to overcome these challenges, policy and regulatory innovation are required with more agility within the planning framework. Different challenges exist in the planning framework in different places of the UK, with some areas facing particular challenges on the road to net zero, such as conservation areas. To enable local areas to overcome the diverse challenges which exist in this space, we suggested the exploration of regulatory sandboxes in various key challenge areas. Planning, as has been highlighted throughout this paper, remains a major constraint to deliver on net zero. Therefore, we suggest that a priority sandbox should be created and run by the Planning Inspectorate. Various outcomes from this might include allowing businesses to temporarily derogate on planning laws where this could lead to reduced carbon emissions aligned with the net zero strategies, such as changing the category of some net zero interventions to 'permitted development'. Critically, learning from previous sandboxes in the UK, there should be greater inclusion during the lifetime of the scheme, enabling not only major industrial players to innovate but also community-based innovation. One potentially impactful way this could be implemented is by creating places — regulatory bubbles — where planning permission is less stringent when genuine community benefit can be realised through community-owned enterprise, distributing the benefits of any action within local areas. Alternatively, greater agency will need to be devolved to local planners to encourage the growth of net zero assets — both generational and demand reduction – where climate emergencies have been declared, reimaging the planning appeals process.

Design principles for collaborative multi-scalar governance

Throughout this research, several emergent principles, that can be utilised to support collaborative multi-scalar governance, have been identified. First, there is a need for greater regulatory flexibility between scales of governance. As parts of the UK continue to be granted devolution deals, there is an opportunity for decentralised governance tools, increasing local ability to adapt to meet local needs. Second, the emergence of SuperPlaces in place-based decarbonisation has the potential to further exacerbate regional inequalities as resources are diverted to key industrial clusters or city regions in the UK, rather than being evenly distributed. It is therefore necessary to develop and implement mechanisms to ensure that

resources are spread geographically and can support genuine levelling up across the UK rather than being concentrated in resourcing hotspots. Third, while place-based decarbonisation action was being taken across all the case study areas, it was clear that these were sometimes aided by actions arising from organisations working across scales. For example, Net Zero Hubs have facilitated local access to funding pots to drive key initiatives. However, Net Zero Forums have limited resources and this has limited their scope to bring policy actors together to address complex issues. Therefore, refocusing and supporting regional and national policy forums should be pursued to facilitate knowledge exchange, grow local capacity — particularly important for smaller areas — and help novel policy innovations move into mainstream local policy discourse. This could also enable the growth of place-specific policies based on local knowledge exchange. Finally, the economic focus of historic initiatives can have local benefits; however, in many cases, genuine community participation is highly limited within governance structures. Given the emerging barriers to decarbonisation from misinformation and mistrust of net zero, deeper participatory community engagement is a necessity. Critically, this should utilise existing anchor institutions as a conduit to engage local people with policy processes such as local citizens' assemblies.

Promoting climate communicators

Our research suggests that, while there has been significant progress in understanding the risks of climate change, there remains a need to increase the number of climate risk communicators to help local authorities and other local actors widen the social acceptance of radical net zero action. Critical to this is the need to build more locally sensitive narratives (including, for example, a recognition of the industrial heritage of an area) around net zero, considering the local issues which resonate with communities and areas in which place-based decarbonisation will occur. Howarth *et al*.[95] indicate that such narratives coupled with communication to local decision makers, can provide meaning to complex challenges and aid local action. To create an effective narrative, resources need to be available at a local scale for actors to understand the level of risk they face. Once a narrative is co-created with stakeholders and the community, one potential improvement is a greater emphasis on the role of communications to share narratives and facilitate public debate to improve governance in an area, which further facilitates civic buy-in of projects.[96] Nottingham City Council has achieved this by having dedicated

[95] Howarth, C. *et al*. (2020)
[96] Coffey International Development (2007)

members of the team working on engaging with the public whilst also building a positive brand image around the CN28 target. Our work with local communities in Staffordshire piloted this approach, seeking to bring together ordinary citizens with scientists and local council actors.

Reshaping the dominance of local economic development

The past couple of decades have seen the institutional landscape for regional, subregional and local governance evolve rapidly and unevenly. The general trend has been towards institutional thickening, generally directed towards economic innovation. A key example is that of the development of Local Enterprise Partnerships, themselves potentially soon to be jettisoned as new fora are developed to try to address the increasingly complex challenges of uneven development. A thread running through these different phases of institutional innovation has been to make local authorities marginal actors. Yet, the place of local authorities in driving place-based net zero decarbonisation cannot be so limited if it is to succeed. A critical limit is the continued financial constraints confronting local authorities. However, as Local Enterprise Partnerships are removed from local governance models, with their decline there is an opportunity for a transformational rethink of local central support bodies of development. Our research has highlighted a fundamental lack of aligned and systemised support for decarbonisation across spaces even within close proximity, resulting in places reinventing the wheel continuously and facing similar challenges. Critically, in its current form, local net zero governance does not provide an adequate framework for the dissemination of knowledge across institutional boundaries. Therefore, it is essential to fill the gap left by the loss of Local Enterprise Partnerships with new institutions which focus on supporting organisations within their locality through the turmoil of net zero. Building on this work, these bodies need to move beyond an economic and business focus, building greater connectivity between state and non-state actors to deliver well-constructed and deliberative processes to support place-specific decarbonisation. In civil society there are examples of such inclusive approaches, which seek, to a degree, to offer a radical critique of production and consumption from which local government could learn.[97]

Our research has shown that local authorities lack clarity on which actions are best for net zero whilst national as well as local discourses remain focused on economic development. This discourse remains central from a national government perspective with the 2023 Spring Budget focusing on increased devolution with a

[97] de Moor, J. *et al.* (2021). See also Fourat, E. *et al.* (2020)

focus on local investment funding.[98] But actions to change this approach are starting to emerge. These are largely focused on improving access to information and supporting the delivery of net zero retrofit technologies and policies through Net Zero Forums (noted throughout the Net Zero Strategy) which can play an important role in overcoming challenges of capacity across different areas. For this not to be tokenistic, it must be coupled with new resources and tools to enable rigorous engagement with deep decarbonisation. To ensure that net zero is at the heart of local decision-making, there is a necessity to ensure that levelling-up partnerships and devolution deals include a clear and specific focus on net zero, alongside economics. With funding for Local Enterprise Partnerships ending in April 2024 this creates an opportunity to reimagine the focus of devolution and ensure economic empowerment is not the sole focus of decentralisation. But without a clear framework, it risks fuelling the division between SuperPlaces and the rest.

Conclusion

A central pillar in determining the success of net zero delivery is likely to be local leadership and its capacity to be open, multi-stakeholder (that is, working within and across scales), and offering transdisciplinary solutions in their region. Place-based decarbonisation has the potential to play a critical, potentially cost-effective, possibly transformative, role in driving tailored local decarbonisation solutions. Local authorities are likely to be an increasingly critical actor in this as the number of devolution deals rises. It is therefore paramount to understand the governance systems which guide the net zero transition, as well as their potential limitations. Our research has offered a preliminary characterisation of the net zero governance regime in four different areas of the Midlands: Nottingham, Leicester, Coventry and Staffordshire. Each area had distinct approaches to governing the net zero transition, with differing levels of success. But these distinctive approaches were not necessarily informed by a deep reflection on the possibilities and challenges of net zero. In Nottingham, which used collective governance methods, there is some evidence of increased local support to address the challenges of net zero action (the citizens' assembly also showed evidence in Staffordshire). There were also indications that a more collaborative form of governance increased the agency of the local scale. Organisations engaged in a more open, reflexive, and inclusive approach to governance are more likely to engage in effective social learning. This open form of leadership is likely to inspire further action by other actors in other sectors and wider society.

[98] Hunt J. (2023)

However, further work is necessary to understand the ways in which local histories matter in developing robust net zero policies that work along the grain of local identities and norms on net zero and build on local opportunities afforded in the transition to net zero. Moreover, each area has encountered challenges, particularly in understanding and conveying risk. To overcome this, policies should be implemented which enable local areas to understand the risks they face, how to communicate those risks with the local population, and critically to consider the opportunities which can emerge from taking decisive and early action on net zero. Finally, even after several years and continued pledges to improve multi-scalar governance, there remains great uncertainty on sub-national leadership and which actors are and should be leading the net zero transition at a local authority level. This must be resolved to support local places to lead their own place-based net zero transition. It is suggested that central government provide a framework and support to enable local actors to have more confidence in pursuing more novel and cooperative governance models within local areas.

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