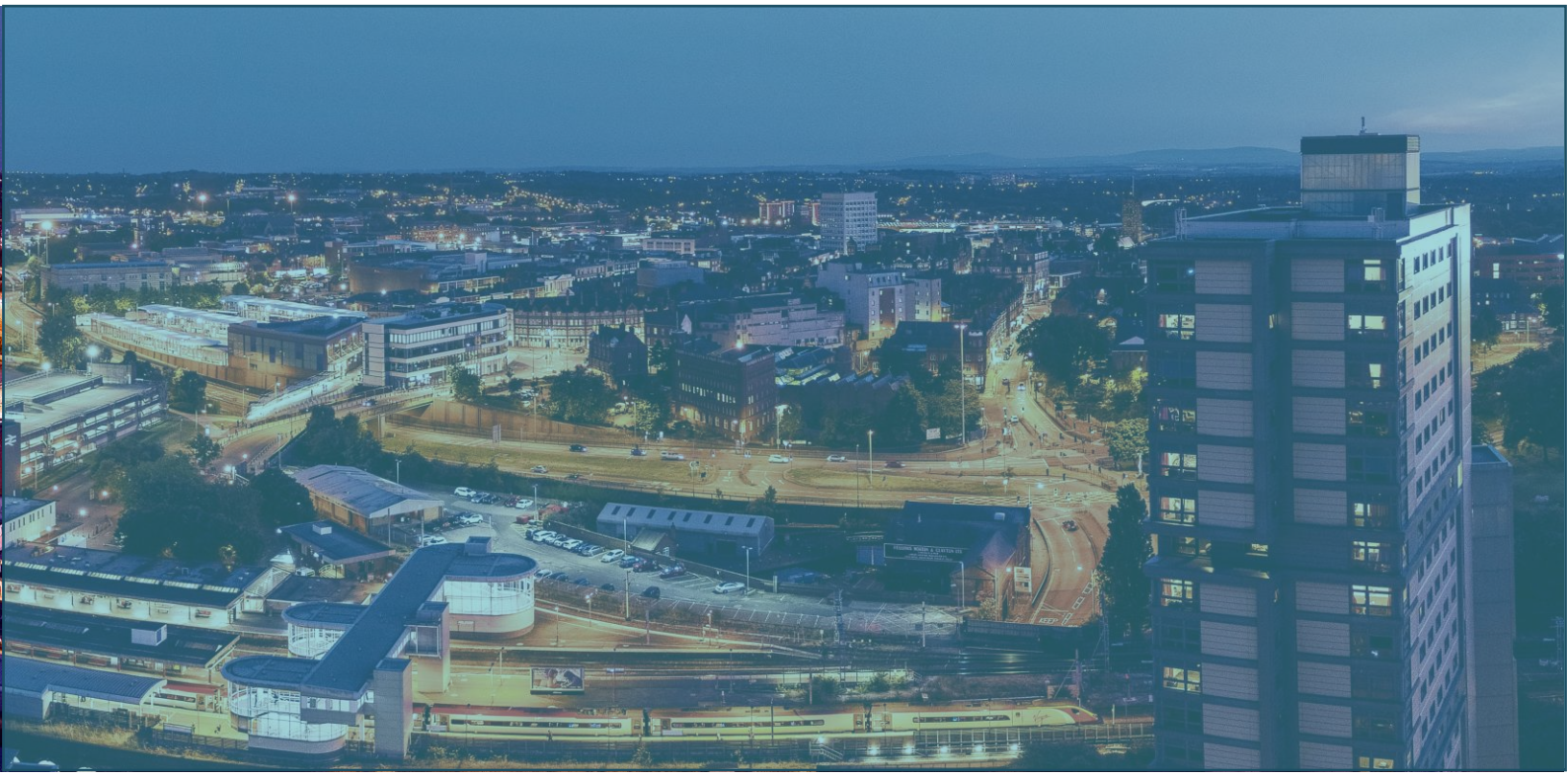


Levelling Up, Emissions Down:

Accelerating Net Zero across the Key Cities

Report prepared by Metro Dynamics and Opergy on behalf of the Key Cities network

Metro Dynamics

Opergy Group

Contents

Acknowledgements 2
Foreword 3

Executive Summary 4
Recommendations to Government 6
Framework for Net Zero 7

1. Introduction 8
About the Key Cities 11
Research methodology 12
Framework for net zero 14
Dashboard 16

2. Net Zero in the Key Cities 17
The experience of Key Cities in delivering net zero 21
Wider local government/stakeholder action 25
Challenges and barriers 27
Where are we now? 31

3. Recommendations to Government 33

4. Call to action 36

Acknowledgements

The Key Cities, along with Metro Dynamics and Opergy, would like to thank all of our members – both political leaders and officers - for their extensive involvement and engagement in the research which informs this report.

We would also like to thank the many other organisations that have participated in this research and strengthened its conclusions, including colleagues from the Universities of: Bath, Bradford, Coventry, East Anglia, Exeter, Gloucestershire, Lancaster, South Wales, Sunderland, and Wrexham Glyndwr who participated in this research via the Key Cities Innovation Network, as well as colleagues from the Department for Business, Energy & Industrial Strategy (BEIS), the Department for Levelling Up, Housing & Communities (DLUHC), 3Ci, the County Councils Network (CCN), the Local Government Association (LGA), and Salix.

Foreword

The urgency to reduce our carbon footprint and transition to net zero has never been greater due to the increasing threat of climate change. By acting now, we can not only protect the environment but also improve the health and quality of life of our residents. This transition also presents a wealth of opportunities for innovation, job creation, and economic growth.

The Key Cities membership has shown a high level of ambition and proactive action in achieving net zero, with many cities developing net zero strategies, forming strong partnerships between community and private enterprises and delivering successful projects across various sectors.

However, the membership has also brought to light several challenges faced by Key Cities and local authorities across the UK in their efforts to achieve net zero. These challenges include the need for devolved funding to enable better planning for the future, building capacity in local authorities to deliver projects, ensuring specialist support at a national and regional level, clarifying local government roles in leading the net zero transition, and providing support for long-term implementation challenges.

We are pleased to see that the Net Zero Review has acknowledged the challenges highlighted by Key Cities within this new research. The recommendations, which have emerged from engagement across the Key Cities membership, are well aligned with those made in the review and in some cases, look to build on them.

With the support of the national government, Key Cities as a collective can accelerate their net zero plans and help realise a more sustainable future for all residents.

Cllr. Richard Cook - Leader of Gloucester City Council and Key Cities Portfolio Lead for Climate Change.

Cllr. John Merry- Chair of Key Cities and Deputy Mayor of Salford City Council

Executive Summary

This report presents the findings of a programme of research with the 27 Key Cities to understand progress towards local net zero plans. Home to a population of 6.2m residents and contributing £150bn to the UK's economy – and distributed across England and Wales - the experience of the Key Cities is highly relevant to the rest of the UK.

The engagement with member cities has presented a number of emerging trends including:

- Since 2019, all Key Cities have declared a Climate Emergency. This has been backed by a stronger strategic emphasis in Councils which is epitomised by:
    - All 27 Key Cities have net zero strategies in place or currently in development. These strategies set ambitious timescales for net zero in local areas and contain a combination of organisational and wider territorial place-based actions.
    - Many cities have and still strive to improve the profile of net zero within their organisational structure, with dedicated and larger teams, improved links with other departments within local government, and better decision-making processes to increase the focus on net zero.
- Strong partnerships are bringing together the local public sector, business, and community groups.
- Councils are working collaboratively and effectively with one another, with improved networking between groups of councils.
- A large number of projects relating across the framework's net zero themes have already been delivered successfully.

Despite this positive progress, Key Cities – and local authorities more generally – experience a number of challenges that prevent them from accelerating their work on net zero:

1. Funding for net zero is insufficient

Local authorities already face long-term funding challenges and given that net zero is not a statutory responsibility, it can fall victim to the need to address other pressing local priorities, especially given the current economic situation. The available government funding pots suffer from tight deadlines, both for initial response and delivery. Specifications often narrow options for local authorities and are typically oversubscribed.

2. Capacity

Local authorities have taken significant steps to develop capacity over the last three years, but there is clear need for more capacity within local authorities in order to be able to scale up activity around net zero, including developing business cases for investment, managing and commissioning projects, and monitoring progress. This is challenging due to a lack of many net zero-related skills across the labour market as a whole. Local authorities also need access to specialist technical skills which is sometimes available via Combined Authorities (where these are in place), net zero hubs,

Catapults, or via private consultancies – though there are varying levels of accessibility to these skills, with cost also being a barrier.

3. Lack of clarity about local government role

The role of local authorities in delivering net zero is not well articulated, leading to differing levels of coverage across different local authorities, and making it harder to earmark dedicated funds for investment.

4. There are several long-term implementation challenges:

- **Transport decarbonisation and EVs:** The transition to electric vehicles is a complex and challenging process that requires significant investment and resources. One of the major challenges is the high cost of EVs, which can make it difficult for fleet operators to make the transition. Additionally, the installation, operation and maintenance of EVs can also be complex and time consuming, particularly when it comes to establishing the public-private partnerships that are needed to make this transition possible.
- **Grid constraints and challenges engaging with Distribution Network Operators (DNOs):** Local authorities seeking to invest in renewable energy generation face significant barriers from the electrical grid. One of the biggest challenges is a lack of capacity, which can limit the scale of renewable energy projects that can be delivered. The National Grid has estimated that the government target of 50 GW of offshore wind by 2030 will require six times the amount of transmission infrastructure that was delivered in the previous three decades. This means local authorities will need to work closely with district operators to ensure the grid can support the delivery of projects.
- **Retrofit:** Though there have been some promising initial programmes, the challenge around retrofit remains vast and complex. The government offers funding for low-income residents through the Social Housing Decarbonisation Fund and Sustainable Warmth Fund, but the amount offered is insufficient for the scale of the problem, and there is little financial support available for retrofitting non fuel poor residents. Apart from issues around funding, Key Cities members have struggled with low worker capacity and breaking into the private sector market. Therefore, better communication and support to the business trades industry is required to entice them into the retrofit market and create a more cohesive plan of action.
- **Climate adaptation requires more strategic cross boundary collaboration:** The UK's National Program of Adaptation highlights the vital role of local government in adapting to climate change and stresses the importance of collaboration across boundaries, where risks are shared and systemic. However, there are challenges to implement cross boundary working due to varying responsibilities and capabilities among local authorities, which leads to inconsistent prioritisation of climate adaptation efforts.
- **Political challenges where policies are unpopular:** the transition to net zero also brings with it several political challenges, particularly in areas where policies are unpopular. For example, measures to promote active travel, restrict car use and create bus and cycle lanes can be controversial and difficult to implement. At the

same time, there is also pressure to move more quickly on these policies in some places. One of the biggest challenges, is making the case for net zero policies in areas with high levels of deprivation and serious economic challenges, particularly when resources are scarce. This can make it hard for councils to allocate resources to net zero projects whilst also meeting the needs of their communities.

Therefore, despite the strong progress by Key Cities members over the last three years, there remain major challenges to overcome, many of which will require central government to put in place the right conditions.

Recommendations to Government

This report has been prepared at the same time the Government has been undertaking its own Net Zero Review. We welcome the findings of the Net Zero Review which emphasise the important role played by local government and envisage a stronger and better-defined role for local authorities. We agree with the Review that significant Government action is needed to achieve UK and local targets on net zero.

Specifically, our members call on Government to:

(1) **Define the role of local government in achieving net zero -** The UK government needs to establish a clear strategy for the role of local councils in achieving net zero emissions and provide devolved funding with net zero powers to local areas, covering services such as installation of EV charging infrastructure and retrofit. It should also create a monitoring framework for accountability and provide sufficient, long-term funding for local authorities. The government should work towards creating an environment for private finance and support initiatives like 3Ci.

(2) **Invest in capacity and specialist skills** - The UK government must offer targeted financial support to train and develop necessary staff and skills, addressing the lack of specialist skills and capacity. It should build on the Green Jobs Taskforce and provide additional specialist capacity through combined authorities or net zero energy hubs. The Environment Agency should conduct climate adaptation audits in collaboration with Key Cities to reduce climate change risks and provide guidance and support.

(3) **Establish new regulations within an investment ecosystem** - The UK government plays a crucial role in establishing regulations to support the transition to net zero, especially for the energy grid. Distribution Network Operators (DNOs) should be required to align their plans with local development plans, and there should be investment in upgrading the grid to handle increased renewable energy generation. The government should also provide clarity on a city's responsibilities in planning consent and building regulations and promote sustainable development through guidelines for environmental impact assessments.

Framework for Net Zero

Alongside this Report, the wider research has involved the preparation of a Framework for net zero. This is a significant resource to help Key Cities members (though is also relevant for other local authorities). The Framework explores nine thematic areas in depth, identifying current and future initiatives alongside an overview of relevant support and funding mechanisms and highlights, and sharing best practices from across the 27 Key Cities members as well as other relevant case studies from around the UK.

This research has also involved the development of a Data Dashboard which provides baseline data on greenhouse gas emissions and other indicators which help track progress towards net zero. Please visit the dashboard on this link.

1. Introduction

The path to net zero is critical for the future of the UK and the world. Whilst national governments have a major role to play in setting overall targets, local government has an essential role in leading the net zero agenda as so many of the needed investments – retrofitting homes, installing EV charge points, planning and delivering local renewable capacity, protecting and mitigating against local climate risk – happen in our local areas. However, it remains imperative that national government takes a leadership role in emphasising the importance and urgency of the net zero challenge, providing necessary support and resources for local governments to drive progress towards this goal.

Investing in net zero has numerous benefits beyond the environmental impact of reducing emissions. Local jobs can be created through the development of renewable energy infrastructure and green technologies. Enhanced energy security and reliability can be achieved through the local generation and storage of renewable energy. The transition to net zero can also have positive effects on public health, such as reducing air pollution and improving wellbeing. These benefits underscore the importance of investing in the agenda at both the local and national level.

Since the first climate emergency was declared by a local authority in November 2018 over 300 authorities have done the same[1], setting targets to achieve net zero as organisations and as places. Many have more ambitious targets than the national commitment to be net-zero carbon by 2050, with some local authorities setting targets as soon as 2025. Key Cities recognise the national economic imperative of moving swiftly on net zero, where creating a stable environment for businesses to invest in, will help to secure local manufacturing supply chains, maintenance, and operations. Additionally, by taking a strong lead on the agenda, the UK can lead innovation in the global market and boost its competitive advantage.

This report is based on research carried out between October 2022 and January 2023. This work involved communications with each of the Key Cities members in at least one forum: via a survey, one-to-one conversations, and a workshop. This was complemented by wider engagement with Government departments, local government membership networks and organisations involved in green finance.

This report therefore highlights the work that has taken place to date across Key Cities members emphasising successes and the challenges that places have encountered in their work towards net zero. In doing so, it clarifies the importance of Local Authorities to the wider net zero agenda as key protagonists in ensuring that net zero investments and initiatives happen locally.

This report also identifies a series of recommendations for Government to ensure that both the UK's and Key Cities' objectives around net zero are met. We are conscious that this work has been undertaken over the same period that Government has undertaken

[1] Climate Emergency UK (https://data.climateemergency.uk)

its Net Zero Review. It is heartening to see that many of the findings of our research are echoed in the Net Zero Review – emphasising the scale of the challenge, the need to move faster, and the importance of empowering local areas to lead this challenge. In some cases, the recommendations of the Net Zero Review could be more ambitious, and we have set out in this report where we feel there is scope for Government to go even further. Nonetheless we call on Government to adopt the findings of the Net Zero Review as a minimum for what is needed for the country to achieve a strong net zero future.

This report is one output of a suite of tools being developed as part of this research. The other outputs are:

- A **Framework for Net Zero**, which sets out a range of actions, funding sources, and case studies of best practice for pursuing net zero in local areas. This is intended to be a comprehensive tool for Key Cities members – and other local authorities – to address net zero challenges in their area. It can help tackle issues around collaboration, by providing a common platform for sharing knowledge and best practices. Through providing a range of tools, funding opportunities and emerging trends, it can improve Key Cities understanding of what is available to them and what interventions are most appropriate to meet net zero targets. The nine thematic areas are illustrated in the below infographic.

- A **Data Dashboard** which provides up-to-date baseline information for the 27 Key Cities on greenhouse gas emissions and other indicators which help track progress towards net zero. Please visit the dashboard through this link.

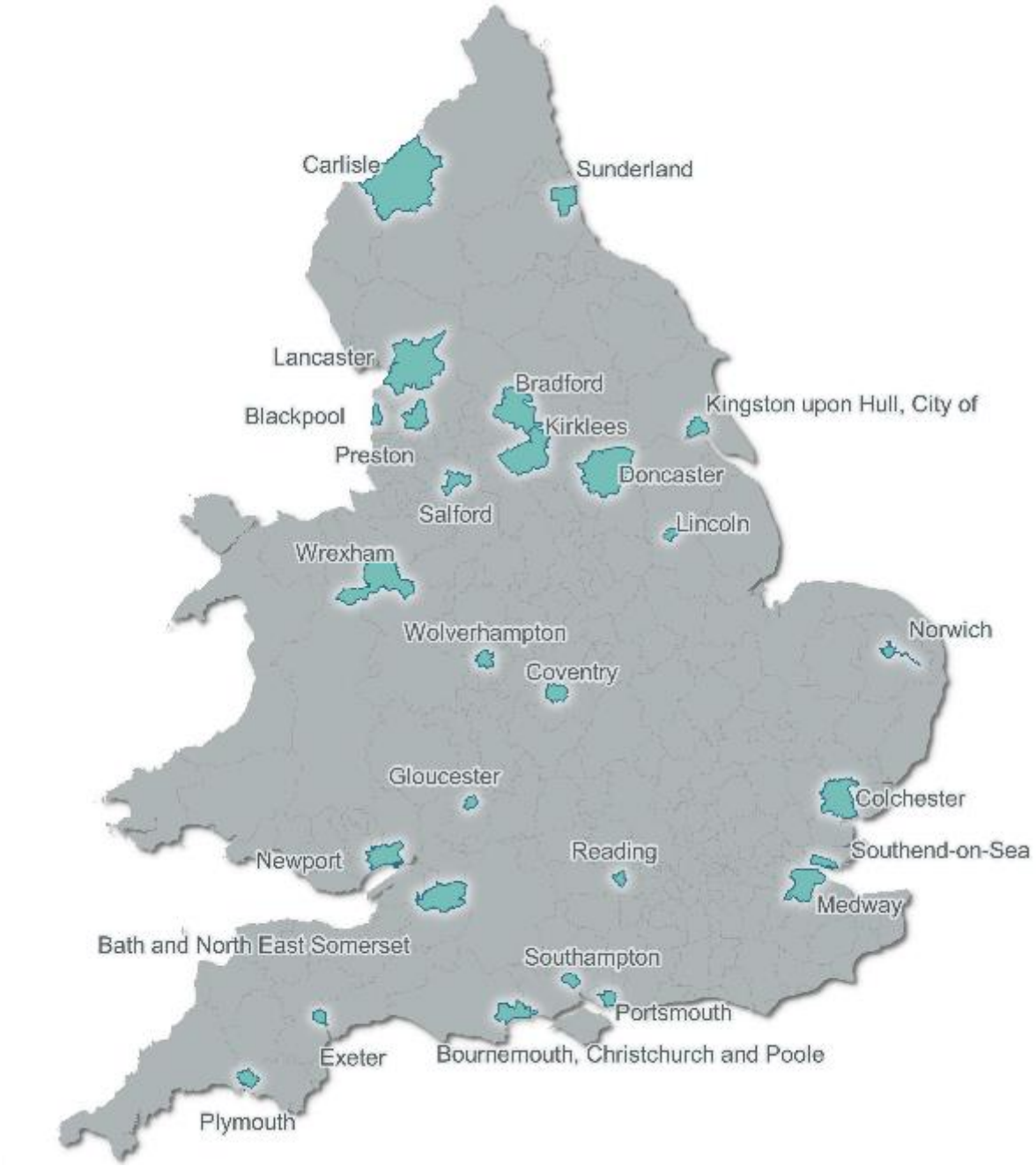
Structure of this report

The rest of the report is structured as follows:

- The remainder of **Section 1** introduces the Key Cities group and describes the methodology of the research.
- **Section 2** sets out the main findings of the engagement, and the main challenges and barriers experienced by Key Cities members.
- **Section 3** presents a set of recommendations for Government.

About the Key Cities

Founded in 2013, The Key Cities is a non-partisan network of 27 cities from across the country. The Key Cities represents the views and priorities of the UK's cities and their residents, advocating on their behalf and emphasising the importance of the UK's cities to the whole of the country. The 27 member cities are home to 10.4% of the population of England and Wales. Between the 2011 and 2021 censuses the population of the Key Cities rose by 5.6%, over the same period the total population of England and Wales rose by 6.3%. With an average age of 39 the Key Cities are slightly younger than England and Wales as a whole, which have an average age of 40.7.



The Key Cities are crucial contributors to the UK's economy, in 2021, 10.1% of total employment in England and Wales was located in the Key Cities. Collectively, they accounted for 7.7% of GVA in 2020 and between 2014 and 2019 GVA increased by 10.6%, keeping pace with national GVA growth which was 10.8% over the same period.

The network connects these 27 cities to each other, building relationships across local authorities and allowing for knowledge to be shared. It also provides a platform for them to give a louder voice to their shared interests, many of the member cities are surrounded geographically by more rural places which may have very different priorities and needs to their urban neighbours. Connecting with other cities through the network allows these places to find shared cause and work collaboratively towards their goals.

The members are a diverse collection of cities, with members including coastal cities, cities surrounded by more rural authorities and those located in more densely populated parts of the country, in close proximity to other urban areas. Economically they have different areas of strength and sector specialisms, along with varying levels of deprivation among their populations. Finally, they are a politically diverse group, with the party composition of leadership varying across the 27 cities. This diversity makes the Key Cities an ideal testbed and their nimble size allows them to act with an agility that can be challenging for larger cities. The Key Cities is an ideal set of places to test scalable innovations, allowing them to be trialled across a diverse set of places whose size allows them to act more quickly.

The Key Cities network works to ensure that the key cities and their resident and business populations are heard in the national debate. It does this through extensive partnership work including long-term partnerships with the Local Government Association (LGA), Core Cities and London Councils and strategic, project-based partnerships with government departments and agencies. The network's All-Party Parliamentary Group (APPG), which was first established in 2017 and meets regularly, helps to ensure representation of the cities' views in Government. The APPG, which is formed of MPs, city leaders and stakeholders, works to develop policy and engage with Government on issues that affect life in the key cities, particularly issues around improving quality of life and promoting sustainable growth. The partnership and policy work is complemented by media engagement, ensuring that the Key Cities' voices are prominent in the national debate, as befits their shared size and economic significance.

Research methodology

In September 2022, Key Cities commissioned Metro Dynamics and Opergy to undertake a review of the current initiatives driving the net zero agenda, the challenges preventing them from taking action and the forms of support required to unlock progress. The purpose of the research was to:

- Understand the progress made by Key Cities members since the first wave of climate declarations and identify where barriers were preventing more decisive action.
- Help galvanise the Key Cities membership and provide a resource for cities who are seeking to improve their impact – with clear, actionable recommendations.

- Set out a clear ask of Government, being clear about what support (in funding / legislative / policy terms) is needed to drive forward net zero in our Key Cities.
- Provide a baseline of data and evidence which can be used to understand the challenge, and measure progress going forward.

In undertaking this research, we started by building on a survey that was undertaken by the Key Cities membership between September – December 2021. This initial survey asked members questions around the date of climate emergency approval, date of net zero target, best case examples of net zero solutions and where central government could help them with their local work. The findings of this research were used to develop a set of questions for this study that would develop and build on the earlier research.

For this study, a second survey was developed, that went out to Key Cities members, and in most instances, was answered by the lead climate/environmental officer in the council. This drew on the questions outlined in the initial survey but went deeper into the challenges/opportunities that members face across the agenda, as well as specific details relating to climate action plans including roles/responsibilities, interim targeting, funding/costs identified for actions, mitigation/adaptation strategies, dedicated capacity for actions set out in plan, and engagement in public/private partnership.

Most questions in the survey were asked from two perspectives; what cities were doing at the organisational (i.e., activity or action that is undertaken solely by the council in relation to the council's direct operations or estate) and territorial level (activity or action which is undertaken across the wider local authority area including those activities led by businesses, residents, third sector etc as well as council activities). This enabled us to grasp the breadth and complexity of the agenda across places and identify where action was being prioritised.

The survey was disseminated through an online platform and received a high level of engagement with a response rate of over 85%. Following the survey, we undertook one to one meetings with Key Cities members, which offered a private forum to discuss in further depth the agenda and their survey responses. Metro Dynamics and Opergy devised a topic guide to steer the conversation which covered:

- Nature of the council organisation and how it has changed.
- Formal organisational structures and how this interlinks between the climate function of the council and other departments.
- Team capacity, shortfalls, and recruitment challenges.
- Climate action plan/ strategy and evidence of their implementation.
- Measurement/monitoring of carbon emissions.
- Progress towards net zero goals.

The survey results and deep dive interviews provided essential input into the development of the framework. A draft framework was presented to Key Cities members in a workshop held in early January, to capture their perspectives on the recommendations put forward and the appropriateness of funding / delivery

mechanisms to implement them. This report, and the accompanying Framework, therefore, reflect the consultation with and feedback from Key Cities members.

Framework for net zero

As well as informing this report, the findings from this research were brought together to produce a comprehensive framework that draws together information around nine net zero thematic areas. These themes have been developed with a steering group and reflect the most relevant activities associated with net zero for Key Cities members.

The framework provides a deep analysis of the underlying context and trends that impact each of the net zero themes and identifies a suite of tools, resources and support that members can draw from as well as funding/financing opportunities to help members accelerate action across each thematic area. The framework also includes a wide range of case studies, that demonstrate successful initiatives across each theme, where these have been drawn from our extensive engagement with Key Cities members, as well as research of wider UK case examples.

The framework's design is user friendly and contains a directory with relevant hyperlinks to document pages, to enhance the speed that members can access relevant information. The framework has provided an essential input into this report, helping to inform the current net zero landscape context across the Key Cities members and the recommendations that have been put forward to government.

You can access the Framework here.

Please see the below infographic which maps out the major thematic areas which local authorities are looking to address in order to reach net zero.

	Energy and Utilities Energy systems, carriers, storage and utilization is the focus of this thematic group. Included within this theme is, production, storage, transmission, distribution, water and communications networks.
	Transport and Logistics Transportation, alternative fuels, parking and road networks are the focus of this thematic group. Included within this theme is fleet, freight and ancillary vehicle decarbonisation, fuelling and charging infrastructure and active travel.
	Residential, Industrial and Commercial Retrofit Public and private sector energy efficiency measures and retrofit of existing buildings and estates is the focus of this thematic group. Included within this theme is public sector, social housing, domestic and non-domestic buildings, private landlords and owner-occupied buildings.
	Climate Resilience and Adaptation

	Climate risk, mitigation and adaptation measures are the focus of this thematic group. Included within this theme are the requirements to continually mitigate against the impacts of climate change and further prepare to adapt in areas of irreversible change as well as where further impact and change is anticipated.
	New Building and Planning Local authority planning and development of communities is the focus of this thematic group. Included in this theme is energy efficiency, low carbon and renewable materials and sustainable design. Furthermore, cross directorate opportunities, technology and holistic planning are referenced.
	Communication and Community Engagement Effective communication and sharing information are the focus of this thematic group. Included within this theme is goal and progress sharing, inputs and feedback from residents, businesses and stakeholders and involving community groups, organisations and leaders in planning processes. As well as the use of public resources, websites, social media, assemblies, forums, internal.
	Land Use and Natural Capital How the UK utilises land is the focus of this thematic group. Included within this theme is afforestation, new housing developments, leveraging natural capital, land use change, protecting and restoring land, as well as energy generation plants including biomass, nuclear, solar or wind.
	Waste and Circular Economy Management of Waste and the implementation of a circular economy are the focus of this thematic group. Included in this theme is promoting and facilitating reduction, reuse and recycling of waste through the waste hierarchy, implementing sustainable material uses and the creation of closed loop systems.
	Public Sector Operations and Supply Chains Considering impacts of public sector operations and how environments are affected by supply chains are the focus of this thematic group. Included in this theme is reducing greenhouse gas emissions, increasing energy efficiency and lowering environmental impacts from products and services.

Dashboard

The **Data Dashboard** provides up-to-date baseline information for the 27 Key Cities on greenhouse gas emissions and other indicators which help track progress towards net zero. Please visit the dashboard on this link.

2. Net Zero in the Key Cities

The UK has made significant progress in lowering carbon dioxide emissions over the past few decades, with a reduction of 73.4% between 1990 and 2021[2], largely resulting from the closure of coal fired power stations and increased investment in renewables, such as solar, wind and nuclear energy.

The UK has a national mandate of reaching net zero by 2050 and has recently enshrined into law its sixth carbon budget for 2035, which corresponds to a 63% cut in emissions compared to current levels. This is equivalent to total CO_2 consumption of below 200 metric tonnes compared to more than 500 metric tonnes observed today[3].

The urgency of the national carbon budget has been underlined by conflict in Ukraine, which has resulted in the wholesale gas price rising by 404% in the past 12 months.[4] As Russian gas supplies continue to be restricted, and other countries reduce their exports to the UK, rising costs across fossil fuels can be expected to persist, which adds to the urgent need to decarbonise the UK's energy supply.

However, the path to net zero is not only being driven by need, but also because net zero solutions increasingly offer returns to the economy, over and above the economic benefits of preventing global warming. For example, renewable energy generation increasingly competes in cost terms with fossil fuels, with the price of solar and onshore wind has fallen by 88% and 68% respectively, since 2010. Indeed, two-thirds of installed renewable power in G20 countries had lower costs than the cheapest fossil fuel fired option.[5] Moreover, investing in net zero solutions will have a range of other economic and social benefits, including job creation, improved energy security and greater public health due to reduced air pollution.

Therefore, the road to net zero is not only essential to prevent climate change, but also to support the economies of places around the UK.

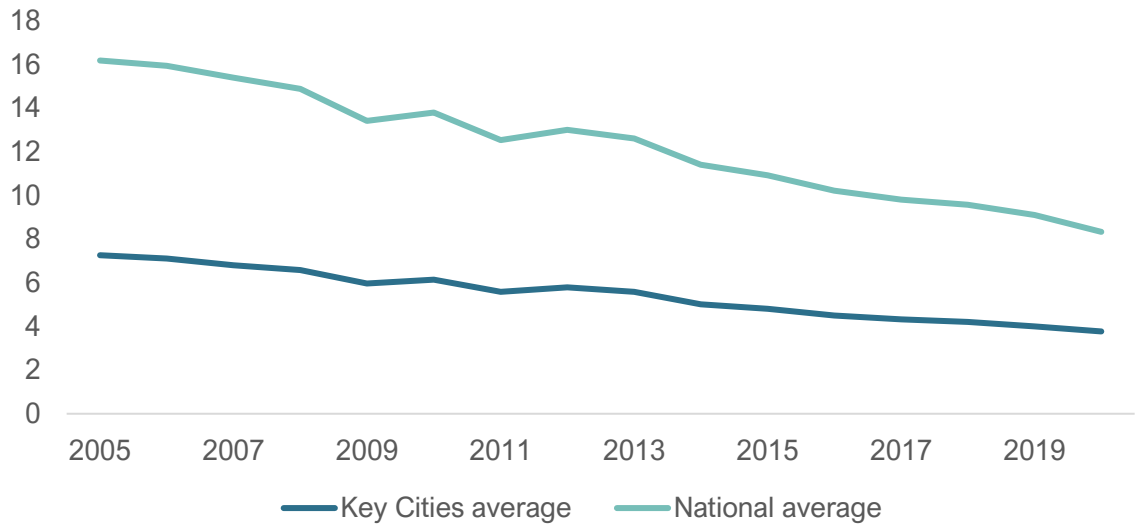
Key Cities today, represent around 10% of the total emissions in the UK but have the potential to disproportionately contribute to achieving the national carbon budget[6]. Given their size and population density, the experience of the Key Cities is highly relevant to many if not most other parts of the country. Therefore, Key Cities can act as a test bed for innovative net zero solutions across the resident population, that can be rolled out to other parts of the UK.

Overall Key Cities, are lower CO_2 emitters relative to the national average, at 3.8 kilotons of CO_2 per head relative to the national of 4.6. However, progress around emissions reduction has stagnated, where the per capita gap between Key Cities and UK average

[2] Department for Business, Energy, and Industrial Strategy, 2021. 2021 UK greenhouse gas emissions.
[3] Centre for Cities, 2021, net zero: decarbonising the city.
[4] Ofgem, 2022. Wholesale market indicators.
[5]International Renewable Energy Agency, 2021. Renewable Power Generation Costs.
[6] Department for Business, Energy and Industrial, 2021 UK greenhouse gas emissions statistics.

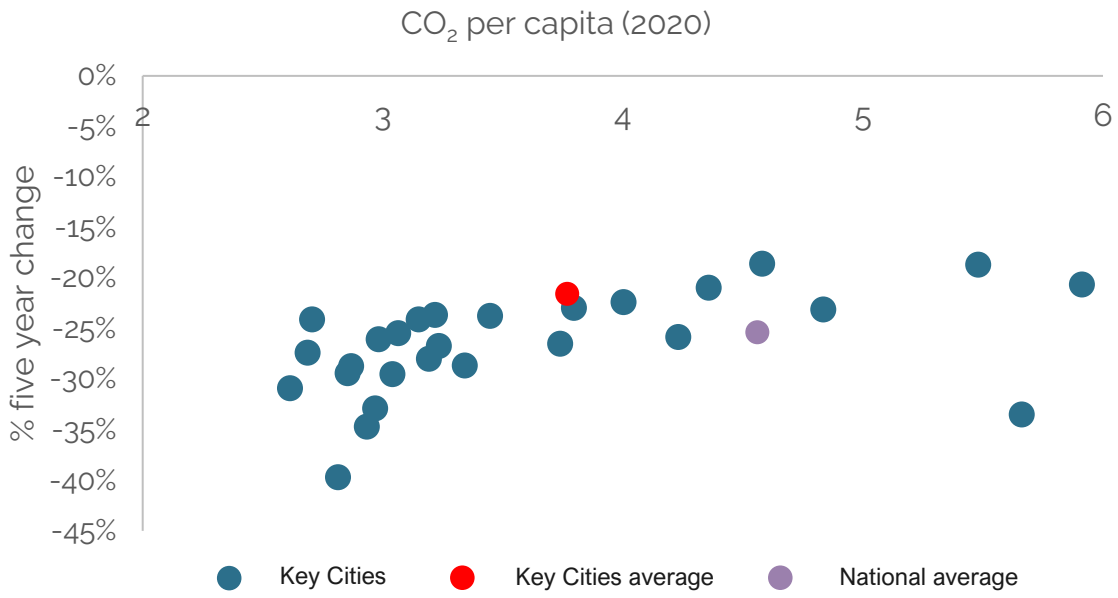
in 2010 was 1.5 compared to 0.8 in 2020. This highlights the importance of reinvigorating efforts to reduce emissions in the cities.

Figure 1. Kilotonnes of Co_2 per capita over time



Amongst the Key Cities, there is relatively wide variation in the emissions produced and the change over time, with the highest emitting cities producing over 3 kilotons of CO_2 more per head than the lowest emitters. The chart below illustrates these differences and identifies a cluster of cities with emissions per capita between 2.5 and 3.5, that have seen emissions decline at a faster pace.[6]

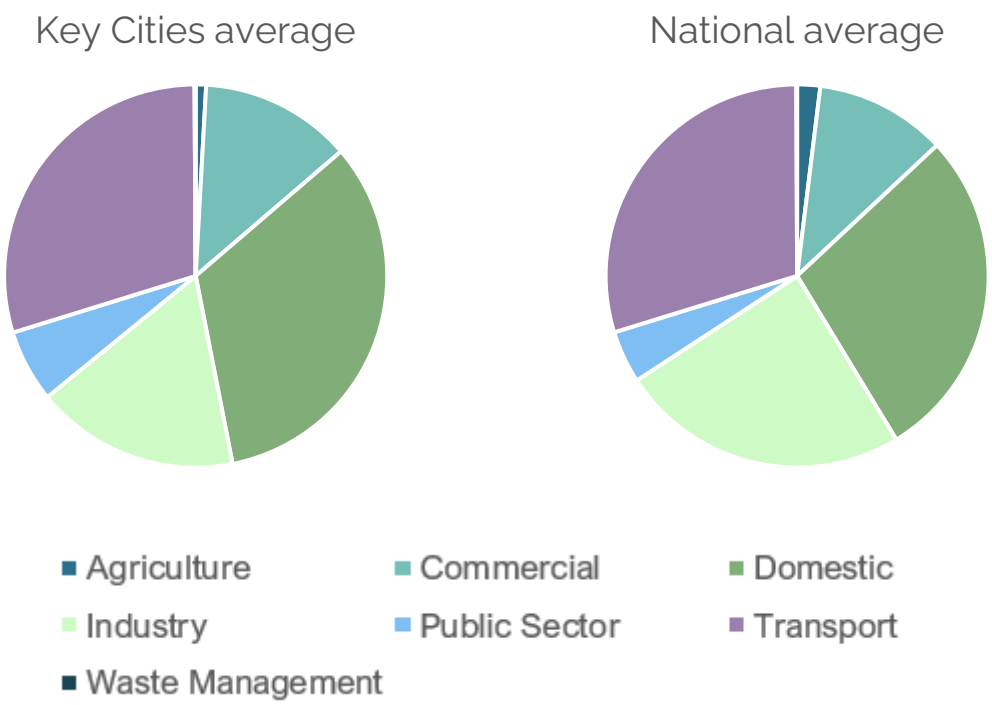
Figure 2. CO_2 per capita and five-year percentage change (Key Cities)



The emissions per capita can be broken down by sector. The pie charts below display the percentage make up of emissions per capita by sector for both the Key Cities and the national average. The most notable difference is that emissions produced by the

industrial sector account for a larger proportion of the total in the national average (24%) relative to the Key Cities average (17%). In contrast, the domestic sector represents a larger proportion of the Key Cities total relative to the national average, possibly reflecting the denser population bases.

Figure 3. Percentage make up of emissions per capita by sector.

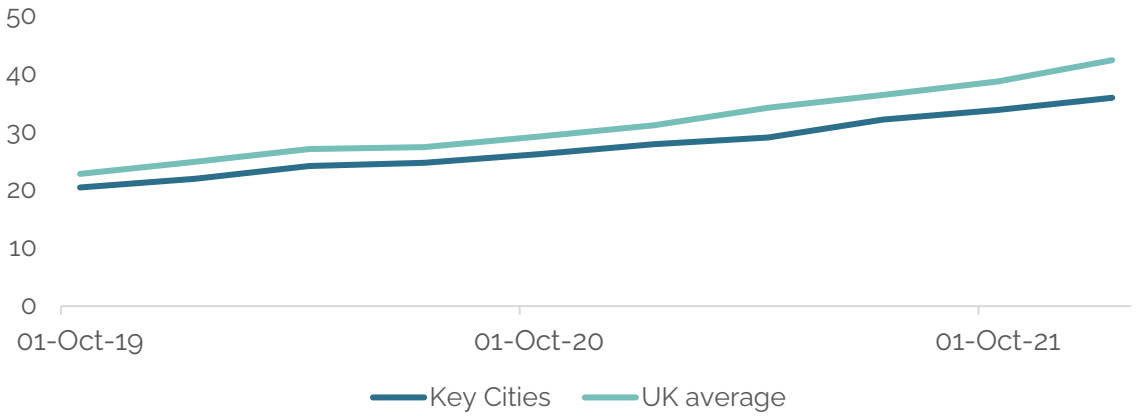


Data shows there is progress to be made in decarbonising transportation. Key Cities have a lower proportion of ultra-low emission vehicles (hybrid or electric) compared to the national average (1.4% vs. 2.3%), although this is not true for all cities, such as Portsmouth where the proportion is much higher (13.5%)[6].

The disparity in the number of EV charging points in Key Cities, at 35.8 per 100,000 compared to the national average of 42.3, may be affecting the trend. Despite, the fast growth rate of EV charging points since 2020, this rate is slower than the national average and the gap between the two appears to be widening (as the chart below illustrates).[7]

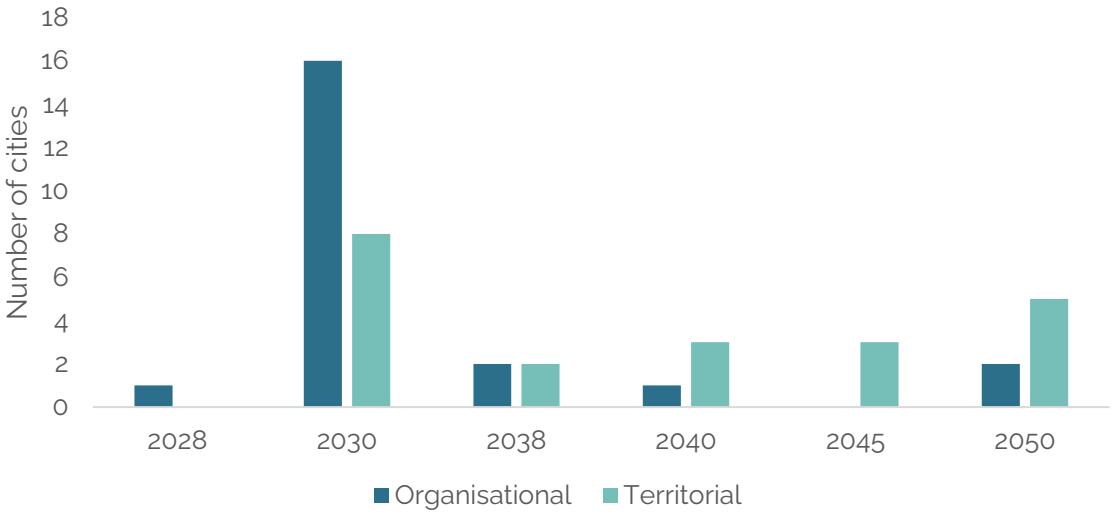
[7] Department for Transport, 2023. Electric vehicle charging device statistics: January 2023.

Figure 4. EV charging points per 100,000 population over time



In alignment with the lower emission levels observed in Key Cities, the majority have set ambitious targets to reach net zero (as shown in the chart below), where over 75% of cities that responded to the research survey, have a net zero target for their territorial area that is prior to the national mandate of 2050. At the organisational level (council related activities), there is an even higher level of ambition with 95% of cities that responded in the survey, setting a target that is more ambitious than the national mandate. The Key Cities recognise the urgency of taking swift action on the net zero agenda to establish local manufacturing supply chains and position themselves as leaders of innovation in the field.

Figure 5. Net zero target across Key Cities (only from survey responses)



The data dashboard that has been provided through this work can serve as a valuable tool for Key Cities to gain insights into their progress towards achieving net zero emissions, including an understanding of their current position in relation to their emission reduction targets. Additionally, the dashboard can help identify the primary contributors to emissions and guide effective strategies for reducing them.

The experience of Key Cities in delivering net zero

Key Cities have undergone a major transition in their net zero approach and response over past five years. All Key Cities have declared a climate emergency since 2019, and in all cases, this has led to a much stronger emphasis on net zero within local authorities over the past few years. Cities are developing long term strategies to deliver against the net zero target, with 35% of Climate Action Plans containing yearly or interim targets for climate reduction.

All authorities now have a dedicated senior lead officer who is responsible for the development and delivery of the climate action plan, with larger authorities reporting having teams of up to 20 staff. In addition, councils are making conscious efforts to expand climate informed decision making across departments, through climate literacy training and the adoption of innovative frameworks such as the doughnut economics model to enable all departments to recognise and monitor their carbon impact.

Cities are demonstrating tangible action against their climate action plans and delivering successful programs/projects that are pushing the agenda forward. These can be categorised as follows:

Place based leadership

Cities have strong political backing and commitment to the agenda and are demonstrating the ability to meet their own specific needs and respond to the opportunities that their particular circumstances present. Blackpool's geography means that it is one of the places which receives the most sunshine hours in the country, a feature which has encouraged a focus on solar power including an ongoing project to develop a major solar farm at Blackpool Airport to provide sustainable energy to the Enterprise Zone. In Portsmouth the presence of a large naval port is both a challenge, due to the emissions associated with it activities, and an opportunity as the port has been a good partner, interested in innovative technologies which could reduce emissions and with the ability to access different funding sources. For example, in Kirklees the restoration of peatlands is a key challenge but doing so would help to reduce CO_2, which healthy peatlands naturally capture from the atmosphere and can reduce risks of wildfires and flooding.

Public/community enterprise partnerships

Cities are also forming cooperative agreements with community enterprises. In Newport, through a partnership with Sustainable Communities Wales and the Wales Cooperative, 2,000 solar panels will be installed at the Geraint Thomas National Velodrome. This is expected to reduce the city councils carbon emissions by 348 tonnes per year and will generate a combined total of 1,973,00 kWh of electricity annually.

Public/private partnerships

55% of cities are collaborating with a private sector organisation, drawing on their expertise and finance to deliver large scale renewable generation and net zero solutions. A recent feasibility study, conducted by Beta Technology in collaboration with Market Infra Consulting, Cenex, Brunel University, and with support from Doncaster Council,

Business Doncaster, and the South Yorkshire Mayoral Combined Authority, has explored the potential for establishing a hydrogen refuelling hub and wider hydrogen ecosystem in Doncaster, UK. The study has identified promising opportunities for developing hydrogen refuelling at a larger scale in Doncaster, including a roadmap for implementing hydrogen as a fuel for transportation, with a specific focus on 44-tonne hydrogen fuel Heavy Goods Vehicles (HGVs).

Norwich City Council has partnered with Octopus Energy to establish a new renewable energy provider called 'Roar Power', that offers cheaper tariffs for residents through bulk purchasing, eco friendly energy and use of Octopus' customer service.

Energy and Utilities

Cities are boosting investment in renewable energy production to lower emissions generated through electricity. Funding secured through the Public Sector Decarbonisation Scheme allowed Salford to install 2,562 solar panels on 21 public building across the city, generating 778,000 kwh a year. Four sites have also had battery energy storage systems installed and the 3.79-hectare Little Hulton solar farm, also funded through PSDS, will triple energy generation.

Wolverhampton has worked with local NHS hospital trust to install 6.9MW solar farm on ex landfill site to direct wire renewable energy to the hospital covering 70% of their energy needs. The partnership also ensures that routine maintenance of the landfill site can be addressed with positive revenue impacts for the council. The solar PV will also be interspaced with rewilding initiatives to improve the biodiversity and natural capital on site.

Wrexham council has received funding from the Welsh Government's Assets Collaboration Fund to advanced plans for the decarbonisation of public buildings. Additionally, funding from Sports Wales Capital Fund, will enable the installation of solar PVs across a range of leisure centres within Wrexham.

Lancaster has secured £6.8m in funding to decarbonise a large leisure centre. The project will remove old gas heating system, an upgrade to the substation, installation of heat pumps and an adjacent 1.3 solar farm, that will save 632 tonnes of CO_2.

Transport and Logistics

Solutions to reduce transport emissions and phase out the use of gasoline/diesel vehicles are being implemented across many cities, including the electrification of local authority vehicles, installing EV charging infrastructure and combining solutions with renewable power generation such as solar carports.

Kirklees has taken big steps towards greening its fleet, where it has invested a total of £7.3m to provide new high tech electric vehicles, alongside new greener engine models. For waste and recycling services, an electric refuse collection vehicle has been introduced following a successful trial in 2021.

Bournemouth, Christchurch, and Poole Council has added four new Dennis Eagle e-Collect electric refuse vehicles to its fleet, powered by 100% green electricity (January 2022). The four electric vehicles were introduced after a successful trial in 2020 and

following a successful tender procedure. Overall, each electric refuse collection vehicle is expected to save between 30-40 tonnes of carbon dioxide annually.

Gloucestershire County Council has announced plans to make it easier to walk and cycle around Gloucester city centre, following the national investment announcement of £250m to promote sustainable travel. Measures such as pop-up cycle facilities, widened footways and crossings, reduced speed limits, and additional cycle parking will be implemented to support social distancing, improve air quality, promote economic recovery, and encourage active transportation. The project will improve health, reduce carbon emissions, enhance air quality, economic benefits, and stronger social connections within the community. The County Council has already invested over £4.7m in cycling and walking interventions.

Residential, Industrial and Commercial Retrofit

Cities are undertaking projects to decarbonise industrial, commercial, and residential properties. Investment is being made into retrofit programs to improve energy efficiency, including installation of new heating systems, insulating windows and doors, and photovoltaic roof panels across domestic/ non-domestic properties.

The city council of Exeter has been making homes more energy efficient through a £2.4m investment comprising of council internal funds and a government grant. The retrofit program has included the refurbishment of 220 properties, including installation of new heating systems and insulation.

Southampton City Council has received £1.7m from the UK government's Public Sector Decarbonisation Scheme to fund energy efficiency and heat decarbonisation projects in public sector non-domestic buildings. The funding will be used for over 20 projects, including investment in solar panels and lighting and heating efficiency measures across nine corporate sites.

Medway has drawn from various government grants, private funding and the councils' own budget to implement a retrofit program to improve the energy efficiency of its 3,000 council owned properties. The council plans to work with residents and landlords to improve the energy efficiency of rented homes and support residents and businesses to improve the energy efficiency of their properties. The council has also supported 137 households to sign up for energy efficiency grants and 80 households to join the Sustainable Warmth Scheme.

Plymouth has installed air source heat pumps in two buildings, the Lord Mayor's residence at Elliot Terrace and the main office accommodation at Ballard House, as part of its efforts to become carbon neutral by 2030. In addition, 195 solar panels have been installed on a newly insulated roof at Ballard House, while secondary glazing and draught proofing have been added at Elliot Terrace. The decarbonisation project, which also includes nine other Council buildings, is funded by the £3.9 million Salix Finance Public Sector Decarbonisation Scheme.

The WMCA has invested in homes in Coventry to undergo 'a deep retrofit' as part of efforts to tackle climate change and reduce fuel poverty. This project includes insulation,

solar panels and low carbon heating systems. The retrofit programme has helped to reduce greenhouse gas emissions and fuel poverty by helping households lower their energy consumption and bills.

Climate Resilience and Adaptation

Cities are investing in climate resilience measures to withstand and recover from the extreme effects of climate change. Cities are developing climate policies that prioritise residents who are vulnerable to extreme weather events such as flooding and fuel poverty. Vulnerability plans have been developed that set out methods to mitigate the impacts on these vulnerable groups, including actions to reduce their fuel bill burden and improve housing quality.

In response to flood damage to the Carlisle Civic Centre, an investment of £3.6m was made to remodel the building to reduce the risk of future flooding and damage, using reinforced concrete on the lower floors to facilitate quick clean up if the area was to flood. Similarly, Hull in response to its high level of flood risk, has developed a number of sustainable drainage systems which have been co designed with residents whose homes are at risk.

New Building and Planning

Cities have an influential role in driving the transition to low carbon through the building and planning sector. Cities are setting ambitious targets around energy efficiency, encouraging the use of low carbon materials, and implementing sustainable design practices. To improve the energy efficiency of domestic properties**,** Lincoln has proposed a new housing strategy, that aims to meet housing demand and improve standards for all types of housing.

Reading Borough Council has provided additional funding of £976,000 for carbon reduction measures at its brand-new leisure facilities at Rivermead and Palmer Park. The funding is going towards the installation of additional solar panels and three air source heat pumps (ASHPs) at the sites. The measures are part of the council's plan to achieve net-zero carbon in Reading by 2030 and are being implemented in addition to existing investments of £1.6m in energy-efficiency measures in the new leisure facilities, such as poolside and sports hall climate controls, energy-efficient lighting and combined heat and power boilers. The new facilities are being developed to BREEAM Excellent standards and will use renewables wherever possible.

Communication and Community Engagement

Cities are effectively communicating and engaging with community to ensure there is transparent sharing of progress to net zero goals and drawing inputs/feedback from residents, businesses and other stakeholders into proposed actions. By involving community in the planning and implementation process cities are increasing buy in and support for their strategies whilst building trust.

Sunderland Council is using the Better Points app to encourage sustainable travel. The app rewards users for using active and sustainable transport options such as walking, cycling, or public transport with points that can be exchanged for rewards. The campaign in 2022 resulted in over 700 users making over 700,000 sustainable journeys

and saving nearly 30 tonnes of CO_2. The success highlights the importance of incentives, collaboration, technology, and sustained efforts in promoting sustainable transportation.

Land Use and Natural Capital

Cities are taking steps to boost the stock of natural capital in their areas, including the protection and expansion of forests, wetlands, rivers, and biodiversity**.** Southend is following a Nature Smart Cities approach, that brings partners from Belgium, The Netherlands, France, and the UK, as well as academic partners to implement nature-based solutions. These will be funded through the Interreg 2 seas programme and will create new green spaces, and green roofs to improve air quality and protect habitats for wildlife.

Waste and Circular Economy

Circular economy approaches are being developed to ensure resources are kept in use within the economy for a long as possible, helping to reduce the level of waste and single use products. Some of the initiatives taking place include repair cafes and improving the quality of recycled materials.

Bath and Northeast Somerset has allocated £14.2m to modernise waste services in the region and reduce the amount of waste sent to landfill and increase the reuse of materials through recycling. It has also invested £41.8m in construction of a new state of the art Keynsham Recycling Hub. This facility, designed to help residents recycle more, will incorporate various sustainability measures, including on site renewable energy generation.

Public Sector Operations and Supply Chains

Cities are taking steps to reduce the impact of their public sector operations and supply chain on the environment. This includes increasing energy efficiency and procuring products and services that have a lower environmental impact.

Preston City Council in Lancashire is a pioneer of sustainable community wealth building, which is a local economic development strategy that focuses on using the community's resources for inclusive growth. Since 2012, the council has collaborated with anchor institutions in Preston to retain money in the area's economy and distribute it more widely. As a result, spending within Preston increased from 5% to 18% between 2012 and 2017, where there is greater emphasis on the local purchase of goods and services.

The framework report contains in-depth information on various case studies that showcase the positive efforts made by Key Cities in achieving their net zero targets. By highlighting successful interventions, the report serves as a platform for other Key Cities to draw inspiration from and inform their own activities towards achieving net zero objectives.

Wider local government/stakeholder action

The Key Cities are taking proactive measures to address the challenge of delivering net zero. Operating in this landscape, are various initiatives that are complementing the actions taken by the cities. These initiatives are offering various programs and policies

aimed at reducing carbon emissions and promoting sustainable practices. Some of the notable developments include:

- The **Local Government Association** has established the Climate Change Hub, which offers a wider range of support to help councils address climate change. A component of this is the net zero innovation programme, that provides funding and support to enable academics and local council to build relationships and tackle net zero challenges together, whilst building internal capacity to help local authorities implement climate action plans.
- **District Councils Network** has published a report[8] that seeks to provide practical examples and policy pathways to net zero action for all types of local authority across housing, energy, manufacturing, transport, and land management. The paper is the result of extensive engagement with local authorities, central government, and stakeholders to help local areas deliver consistently across the strategy.
- **3Ci** is a partnership between Core Cities, London Councils, Connected Places Catapult and Key Cities. It was established to support local authorities to secure the large amounts of long-term finance which will be needed to achieve net zero. Its focus covers the retrofit of residential and commercial buildings, integration of renewables, moving to sustainable transport network, circular waste management and improved green and blue spaces.
- **UK100** is a network of local government leaders working together to deliver 100% clean energy by 2050. It supports Key Cities by providing resources and opportunities for knowledge sharing and collaboration, such as events and workshops. UK100 also works to influence national energy policy and advocate for local government action on climate change. Through these efforts, UK100 aims to assist Key Cities in their journey towards net zero emissions and a cleaner, more sustainable future.
- **The Local Net Zero Forum** within the Department for Business, Energy and Industrial Strategy (BEIS) is a platform that brings together local leaders, key stakeholders, and government representatives to discuss and advance the net zero agenda. The forum provides a space for participants to exchange ideas and share best practices on how to effectively decarbonise cities and communities. By fostering collaboration and cooperation, and using the collective knowledge/resources of members, the forum can help support Key Cities to achieve their net zero targets.

These are just a few examples of the initiatives being taken to support Key Cities in their transition to a net zero future. There are also many other efforts being undertaken by government and the private sector to help achieve this goal.

[8] District Councils Network & Localis, 2022. Mapping a route to clean local growth.

Challenges and barriers

The Key Cities have all taken the first steps to net zero, publishing climate plans with net zero targets and appointing officers with responsibility for these plans. Their work to date has seen successes across a wide range of areas but the research undertaken has highlighted the extent of the challenges that are facing local authorities working towards net zero. Through the course of the research several places expressed concern that they are not on target to meet the net zero targets set in their climate plans, despite strong commitment and buy-in across their organisations. Enabling places to overcome these challenges and barriers will be critical to allow them to accelerate progress towards net zero so that local authorities can achieve their targets, ensuring that the UK does the same.

Insufficient funding

The first challenge, a major theme across all the research which informed this report is funding. The scale of the funding challenge cannot be overstated, work by 3Ci found that achieving net zero in the 12 Core Cities would require investment of £206bn[9]. There are a large number of funding sources available, but these can be complex and difficult to access, with timescales for applications and project delivery that local authorities can find challenging.

The example of the Net Zero South East Hub clearly illustrates the consequences of restrictive timelines. They secured £78m from the Sustainable Warmth Programme and planned to install energy efficiency heat technologies for 7,500 homes in fuel poverty. However, a shortage of the required skills meant that only 1,750 homes were completed in the required time and £53m of the funding had to be returned to BEIS in 2022[10]. Another example is the Public Sector Decarbonisation Scheme, which provides funding to decarbonise public buildings, a number of cities commented on the short window between announcement and the application deadline, and how challenging they found it to prepare a bid in the available time[11].

Funding pots are often designed to address specific issues – e.g., uptake of heat pumps, or solar panels - or achieve particular objectives, and therefore have narrow criteria for project eligibility and funding allocation. As a result, local authorities can find themselves being led by funding requirements to select projects, rather than being able to take a more strategic approach based on an assessment of their priorities and most pressing needs. The competitive bidding process for many of these funds creates capacity challenges and in some cases the amounts available do not match the ambition of places.

This point echoes the Net Zero Review, which heard that uncertainty around the length of funding commitments and siloed approaches by government departments are a

[9] Our Pathway Towards net zero Investment and Growth. 3Ci
[10] Net zero homes need £150bn and workforce of 46,000. BBC News.
[11] It should be noted that in the most recent round of the PSDS the design of the scheme was changed in part to try and help local authorities to access it, reserving a set proportion of the total pot for local authority bids.

barrier to investment and recommends a wholesale simplification on a landscape which is "*disjointed, unfair, and expensive for local authorities to navigate*[12]". It also reflects a wider shift in dialogue around local government financing, with increasing public criticism of the competitive bidding approach to funding[13].

Local authority structure and powers

Another widely shared challenge concerns local authorities' structure and powers. Key Cities members are a mixture of unitary authority and district local authorities, some of which are part of wider County Councils or Combined Authorities with elected mayors and others which are not part of a larger structure. Transport planning is an important area of difference between members; 19 members have control over this area of policy while eight do not. Given that transport is a major contributor to emissions across all members (across the Key Cities it makes up 30% of emissions on average), the ability to affect this is a crucial part of reaching net zero. Some cities will have no direct control over transport and will need to work with their county council to address transport emissions.

Changing structures of local government will also impact their progress towards net zero. Carlisle has a Local Environment (Climate Change) Strategy for its area and binding emissions reduction targets. In a restructuring set to take place before 1st April 2023 it will be combined with Allerdale and Copeland to make up a new Cumberland local authority. This new authority will need new climate plans (combining the plans of the current authorities at a minimum) and monitoring data will also need to be integrated.

Capacity

Members also face capacity challenges. One element of this is the capacity demands placed on them by how funding opportunities are organised. Many local authorities have found it challenging to recruit climate officers to their team, while a number of climate officers we spoke to reported that their post had been unfilled for periods of several months before they were recruited.

In order to plan and monitor the transition to net zero a considerable amount of technical expertise is required and accessing this is a challenge for many Key Cities members. One example of this is the lack of environmental reporting systems. It is challenging for local authorities to unpick the carbon emissions arising from different council related activities (and fuzzy organisational boundaries can compound this). In this case there are lots of toolkits available, but it is hard for councils to determine which are best to use, places need wider support to understand the resources which are available to them.

The framework provided in this research, can be used by members to understand the resources available to them and presents recommendations on successful approaches to monitoring progress. Additionally, the data dashboard supports members to

[12] Mission Zero – Independent Review of Net zero. pg 13
[13] English councils: the budget cuts that are threatening 'levelling up.' The Financial Time

determine their territorial emissions, enabling them to monitor their overall carbon footprint more effectively.

Uncertainty around new technology

A large degree of the uncertainty regarding the transition to net zero and the timescale on which this can be achieved is due to uncertainty around the development of new technology. One example of this is in fleet electrification, where a number of places cannot at present electrify 100% of their fleets as some of the vehicles they require do not yet exist as EVs. More broadly there is a lot of uncertainty around the trajectory of battery and hydrogen technologies, the development of these and other technologies will be important to meeting net zero targets, but the uncertain pace of their development creates a significant risk.

The rapid development of new technologies and the need to adopt them also introduces risk for local authorities when they are deciding to invest. The pace of change is very difficult to anticipate, and investments may become outdated more quickly than expected, adding risk to plans. It is impossible to remove all of this risk but addressing a lack of clarity on future policy and direction from the government and the difficulty of accessing expertise and resources to understand the current expectation around technology development could help to reduce this and make these decisions easier for places to navigate. The recommendation made in the Net Zero Review to create a roadmap setting out decision points for the development and deployment of R&D and technologies is a helpful step towards greater clarity but does not address the specific needs of local authorities.

Rising energy prices

The impact of higher energy prices as a result of the invasion of Ukraine by Russia and the global response to this has been a recurring theme. On one hand this has helped to make a stronger case for more local, renewable energy generation, as several cities who have their own energy generating capabilities on council buildings speak of how they are saving large amounts of money as a result. And we were told of cases where projects previously set aside as unviable are now going to be reviewed. However, this has occurred at a time of a cost-of-living crisis (and has served to worsen this crisis). Households across the country are being placed under great strain and local authorities, with their limited funding and capacity are prioritising delivering support to people in increasingly challenging circumstances. High inflation is reducing the funds available to councils in real terms, decreasing the amounts that they have available to invest and rising interest rates will raise the costs of borrowing.

Grid capacity constraints

There is a rising interest in local energy generation, partly driven by high prices in energy markets. This is an area where many Key Cities have experience and many of the places we spoke to have successfully delivered renewable energy projects across their estates and in their territories through partnerships with other local groups and partners. However, their ability to continue to deliver projects of this nature (along with new developments, transport electrification etc) faces a significant barrier where there is not

sufficient electrical grid capacity. The scale of this challenge is significant; and will impact national schemes and more localised ones.

According to the National Grid, the government's target of 50GW of offshore wind by 2030 will require six times the amount of transmission infrastructure as was delivered in the previous three decades[14]. Local projects also require changes to the grid. Bath and North East Somerset, which was consulted in this process, is aiming to deliver 300MW of locally generated renewable energy in order to meet their net zero targets. To date 29MW has been delivered in the authority area with another 25.7MW approved and in progress projects but, without an upgrade to the grid, no projects can be delivered above 1MW without reserved capacity until at least post 2028, which brings into doubt the likelihood of net zero targets being met.

The electricity grid was designed to serve large coal and nuclear generation plants, meeting the needs of the country in the 21st century will require updating transmission and distribution networks to enable more localised renewable energy generation and to support the critical functions of support storage at scale and active demand side management. Without serious action to address the challenges facing the grid Key Cities and other local authorities will not be able to deliver the projects needed to reach net zero on the required timeline.

Retrofit

Another vast and complex challenge to the net zero agenda is around retrofit, where homes are responsible for 35% of energy use and 23% of total carbon emissions. The government aims to retrofit all homes to the highest energy standards by 2050, which would save households around £250 per year and reduce the UK's carbon emissions by 9%. However, the government funding available for low-income residents through the Social Housing Decarbonisation Fund and Sustainable Warmth Fund is insufficient and there is little financial support available for retrofitting non-fuel poor residents.

Key Cities have also struggled with low worker capacity, shortage of materials needed to carry out upgrades and breaking into the private sector market. The government needs to provide better support and communication to the business trades industry to entice them into the retrofit market and create a more cohesive plan of action.

Climate adaptation requires more strategic cross boundary collaboration

From a climate adaptation perspective, progress on this front is lagging behind some of the other sectors, where there is a lack of discourse on the necessary investments needed to prevent long term damage from climate change. Some cities have begun to shift their focus from mitigation to adaptation as they face the increasing impacts of extreme weather events, but there is a need for greater focus on adaptation essential services and infrastructure. In order to tackle climate adaptation, both the Key Cities and

[14] Mission Zero – Independent Review of Net zero. pg 74

National Program of Adaptation has stressed the importance of collaboration across boundaries, where risks are shared and systemic such as flood risk.

However, there are challenges to implement cross boundary working due to varying responsibilities and capabilities among local authorities, which leads to inconsistent prioritisation of climate adaptation efforts.

Political challenges where policies are unpopular

A final challenge that has been highlighted, in different guises, across Key Cities members is the political risk that accompanies net zero policies. This can range from quite specific risks; many urban authorities receive a non-trivial amount of their income from council car parks to much broader challenges. In places with high levels of deprivation and serious social and economic challenges it is difficult to make the case for pushing policies on net zero and seeming to be prioritising net zero ahead of development and council services. This is a real challenge, partly due to councils needing to allocate scare resources in the face of serious challenges where some are, in the present, far more tangible and having an impact on people's lives.

However, there is a strong case to be made that the green technologies and industries have developed to the point that investing in them and making them a focus of policy is no longer something that should be pursued because it is the right thing to do. There is a compelling economic argument to be made that councils can save money and boost growth through investing in decarbonisation and promoting green skills and industries. Making this argument in a convincing way will require sufficient evidence of the benefits that will arise to local people.

However, in order to develop this evidence, councils will need support and will have to be more proactive in asking the questions to local stakeholders and engaging them in these issues. Councils must have the access to resources and funding to be able deliver the projects in their climate plans without having to compromise on the other important services that they offer.

Where are we now?

There have been a range of successful initiatives to deliver net zero solutions that have demonstrated strong political leadership and proactive action through public/private partnerships. Cities have demonstrated they understand the breadth of the net zero challenge, implementing projects across various sectors, including energy generation, efficiency, waste management, transport, and climate adaptation.

However, challenges and barriers remain. Key Cities have expressed concern about not being on target to meet their zero targets, despite strong commitment and buy in across their organisations. Overcoming these challenges will be critical in allowing Key Cities to accelerate their progress towards net zero.

The Net Zero Review provides a detailed evaluation of the progress of local places in the UK towards achieving net zero. The review offers a series of recommendations to government for helping places deliver on the net zero objective. For the review to be effective, it is crucial for the UK government to accept its recommendations and provide more ambitious support for the Key Cities. Despite, the strong commitment and progress

observed, the data reveals the journey towards net zero is stagnating and that government action is required to reinvigorate efforts.

The following section proposes a series of recommendations that are closely aligned with the key findings of the Net Zero Review, but also highlight areas where further action is necessary to accelerate progress towards a sustainable, net zero future.

3. Recommendations to Government

As set out in this report, Key Cities have made significant progress towards their net zero goals. The framework and dashboard supplied in response to this research will go some way in assisting member cities in their endeavour. However, UK government has a crucial role to play in making net zero a reality by providing more a funding and regulatory landscape that is consistent with the country's net zero ambitions.

Through our engagement with cities, it has become clear that local authorities throughout the UK are seeking leadership from central government on the net zero agenda and to emphasise the urgency and importance of the challenge.

Below we set out our recommendations to UK government, articulating the best approach to addressing the constraints Key Cities face and in support of an investment landscape that accelerates project delivery and action.

1. Define the role of local government in achieving net zero

It is imperative that the government establishes a clear and comprehensive strategy for the role of local councils in achieving net zero emissions. **Local authority councils, have a vital function in local place leadership but have been hindered by a lack of dedicated funding.**

To address this, it is crucial that the government provides devolved funding to places, where devolution deals set out clear net zero powers and funding to be agreed with local partners**,** which could cover a range of services including the installation of EV charging infrastructure or retrofitting homes**. This would allow local authorities to plan and invest in the medium term and reduce capacity challenges in relation to bidding for competitive funding pots.** To support this investment**,** monitoring frameworks should also be established to provide transparency and accountability for local authorities in their efforts to achieve net zero.

Additionally, the **UK government must ensure that central funding pots are sufficient, long term and provide clear timescales** for local authorities to work within both the bidding and delivery process. This should rectify the current issues, where many places have been forced to return funding due to inflexible requirements.

The UK Government also has an important role to play **in creating an environment to 'crowd in private finance and build the local supply chain**, by providing certainty over future regulation and supporting initiatives like 3Ci.

The Net Zero Review concurs with our recommendation, where it calls to introduce a statutory duty for local authorities to take account of net zero targets based on a framework of roles and responsibilities. It highlights the need for simplifying funding, through devolved funds and a reform of central government pots requirement to improve delivery. The Review advocates using regulation to mitigate project risks and drive private

investment. Our recommendation builds on this by stressing the need for initiatives such as 3Ci to aid authorities in securing long term financing.

2. Invest in capacity and specialist skills

A lack of specialist skills and capacity within Key Cities limits their ability to deliver net zero projects. Building on the funding propositions outlined above, the **government should offer targeted financial support** to help local authorities train and develop the necessary staff and skills. Funding support could also improve recruitment practices through boosting the salary offer that councils can make, to help to attract and retain more highly skilled staff.

The government should build on the work undertaken by the Green Jobs Taskforce **to better articulate the skills required to deliver on the net zero agenda**. Enhancing councils understanding of what skills and roles are necessary to deliver projects, will not only assist in making recruitment practices more efficient, but will allow councils to have effectively tailored internal training and support programs.

Provide additional specialist capacity to local authorities through combined authorities, net zero energy hubs or catapults. **The government should consider investing in capacity at these organisations**, so that they can offer better technical support to local authorities. More should be done to raise awareness of the services that these organisations can offer to places and provide incentives for local authorities to utilise their services which should strengthen their level of engagement. One specific area where capacity building may be needed is to boost skills to develop public-private partnerships, as the engagement carried out for this project suggests there are many councils who are not currently pursuing these, indicating a need for skills development in this area.

From a climate adaptation perspective, **the UK government should strengthen the role of the Environment Agency in working with Key Cities.** The Environment Agency should conduct comprehensive climate adaptation audits in collaboration with Key Cities. This will help identify and target investments that will reduce the risks of future damage from climate change. Local councils often lack the resources and expertise to address climate adaptation effectively, so the Environment Agency can play an important role in making sure that investments are used in the most effective way.

Increased investment in climate adaptation is necessary to prevent significant damage in the long-term. The Environment Agency can help ensure that progress is consistent across local authorities by providing guidance and support. This will help overcome the challenges caused by varying responsibilities and capabilities among local authorities.

The Net Zero Review supports our recommendation in promoting the delivery of the Green Jobs Taskforce, including the development of relevant skills for net zero delivery. Our recommendation extends this by emphasising the importance of developing skills in local council teams through climate education and training. Additionally, whilst the focus on skills in the review is specifically around achieving net zero, the significance of developing skills and capacity around climate adaptation should not be overlooked as

well as the role that the Environment Agency can play in supporting places to minimise the long-term damage from climate change.

3. Establish new regulations within an investment ecosystem

The UK government plays a pivotal role in establishing new regulations that help places transition to net zero. This is particularly relevant for the energy grid, where to support planned renewables growth at the local level, distribution network operators should be required to demonstrate how their plans align with local development plans.

This includes planning for the integration of large scale and distributed energy generation such as wind and solar power into the grid. As the number of new renewable projects are integrated, **it is important that the distribution network operators have the necessary infrastructure to handle the increased demand and variability of renewable sources.** This may require significant investment in upgrading the grid to ensure that it can handle the increased energy generation. This should also extend to electrification of transportation, where upgrading of existing substations and transmission lines may be required to implement EV charging points.

The role of national government in setting building regulations and standards is vital in ensuring that new development is greener and more energy efficient. The government should provide greater clarity on the role that Key Cities have in planning consent, by outlining their responsibilities and the extent to which they can impose on developers to contribute toward the net zero agenda in planning policies and regulations, such as building standards and onsite renewable energy requirements. This should include guidelines for how Key Cities consider the environmental impact of proposed developments and actions they take to promote sustainable development.

The net zero review agrees with our recommendation, for government to work with network operators to facilitate anticipatory renewable investments in the grid. Whilst it provides a series of recommendations around improving energy efficiency, it is extended in this report to cover the responsibilities local authorities should have in planning consent and how they can impose requirements on developers to support greener development.

4. Call to action

Given their size, density, and interconnected network, Key Cities play a critical role in achieving the UK's net zero goals. They offer a unique platform for collaboration on issues of net zero, allowing cities to share best practices and knowledge and serve as test beds for innovative solutions that can be scaled up across the country.

The framework developed in this research provides cities with the necessary tools and resources to further their progress towards net zero and a platform for collaboration to learn and exchange ideas. Key Cities are taking practical steps to ensure the framework is embedded across their network, facilitated by a workshop to discuss its implementation. The dashboard produced will help Key Cities understand the nature of the challenges they face and inform more targeted intervention.

Key Cities are making great strides towards achieving their net zero goals and are clearly demonstrating proactive action to accelerate their progress through these research outputs. However, significant barriers beyond their control restrict progress, and the government must take on a leadership role in supporting this transition by providing greater clarity on local government's role, building capacity and skills, and creating a supportive regulatory and investment environment. Our recommendations offer a way forward for the government to support Key Cities' net zero efforts.

To achieve this, the UK government must take action to provide devolved funding and powers to local authorities, strengthen the skills and capacity of council teams, invest in upgrading the energy grid to support the integration of renewable energy and electrification of transportation and setting building regulations that support greener development.

By putting in place the right conditions, the government can help Key Cities to accelerate their progress towards net zero and serve as a model for other areas in the UK. This, in turn, will contribute significantly to the nation's transition towards a sustainable future, whilst unlocking a multitude of wider economic and social benefits.