

# Net Zero Review

## West Yorkshire Combined Authority Response

27<sup>th</sup> October 2022



**Purpose:** Ensure net zero is delivered in a pro-business and pro-growth manner.

The review will consider how the government's approach to net zero can:

1. Deliver maximum economic growth and investment, driving opportunities for private investment, jobs, innovation, exports, and growth right across the UK.
2. Support UK energy security and affordability for consumers and business and the need to rapidly increase and strengthen UK energy production and supply.
3. Minimise costs borne by businesses and consumers, particularly in the short-term.

There is a total of 30 questions in the consultation, but only 11 are appropriate for us to respond to.

Our main asks of government:

1. **National policy must provide long-term funding certainty to develop strategic approaches to decarbonisation.** Short-term funding pots create a barrier to net zero due to short timescales inherent in the bidding process and the tight delivery windows to develop and deliver projects. Furthermore, the lack of funding for feasibility studies and project development has resulted in net zero projects staying at 'idea stage' unable to progress, despite strong interest from stakeholders. The lack of long-term funding certainty also inhibits the development of local supply chain capacity, especially within skills.
2. The transition to net zero will bring demand for new skills whilst seeing demand for current skills fall dramatically. Therefore, **it is important that government provide further devolved skills funding and powers to Mayoral Combined Authorities.** We are best placed to understand the skills demand in our geography working alongside industry partners to support individuals to adapt their skillsets to the changing labour market, increase productivity, and ensure a just transition to net zero.
3. A current barrier for some households is the upfront cost associated with home decarbonisation. **The government must facilitate and accelerate the deployment of financial mechanisms and models that allow homeowners to implement energy efficiency and heat decarbonisations without an upfront cost.**
4. To support businesses to decarbonise, **the government must introduce a comprehensive SME business efficiency programme based on the various ERDF supported local authority delivered projects.** Furthermore, the government must re-introduce more competitive feed-in tariffs to support customers and businesses with decarbonisation. Moreover, further provide fund programmes such as the REBiz programme, that can support SMEs to become more resource efficient and adopt circular business models.
5. The provisions of the Planning Acts and Climate Change Act need to be better connected so that planning can deliver emissions reductions. Housing is

currently being delivered that will require retrofitting in the future. **The government must strengthen national policy guidance and the introduction of a legal provision for planning on climate change.**

## **Consultation response**

### Overarching questions

1. *How does net zero enable us to meet our economic growth target of 2.5% a year?*

Decarbonising the UK's built environment presents an enormous investment opportunity, for example, the adoption of low-carbon heating technologies, energy efficiency measures and a shift towards low-carbon fuels can lead to positive impacts on the economy, with a £6.8bn increase in GDP by 2030.

Energy underpins economic growth and developing a resilient, net zero energy system is critical to reducing energy bills and ensuring energy security. Decoupling economic activity from environmental damage will strengthen our economy and provide new opportunities for businesses, such as growing supply chains for renewable energy, housing retrofit, and forestry. Moreover, ambitious action will also help us to protect key sectors within our region, such as agriculture, retail, hospitality, manufacturing, and tourism.

The UK has significant manufacturing capacity in heating appliances (e.g. gas boilers), this has the potential to dramatically increase investment and create jobs through energy companies, manufacturers and installers. A 2020 BEIS stud<sup>1</sup>y suggested that manufacturers would be able to respond and supply under high-ambition heat pump deployment scenarios. Leading manufacturers such as Vaillant and Kensa are joined by energy companies including Octopus, OVO and EDF who are currently making major investments in the electrification of heat in projects across the UK. However, currently as of March 2022, there were only 1,294 MCS certified heat pump businesses collectively delivering 7,783 installations a month. The government has a target of 600,000 heat pumps a year, the sector requires an increased capacity to achieve this, equating to a further 7,000 contractor businesses. The Heat Pump Association estimate the UK requires at least 50,200 installers by 2030 to deploy 1 million heat pumps.

The Climate Change Committee's analysis demonstrate that heat pumps are the cheapest pathway to decarbonise heat. Moreover, it represents a strategic opportunity for UK based clean tech exporting and innovation. The European Commission plans to install 60 million heat pumps by 2030 in their response to the gas crisis. Major

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economies, including the US, Germany and the Netherlands are rapidly scaling deployment of heat pumps, representing a major exporting opportunity for the UK.

Improving energy efficiency has benefits outside of traditional pathways to economic growth through improving livelihoods, health, and well-being. In 2019, the UKERD found that energy efficiency contributed to 25% of all the UK's economic growth since 1971. Poor energy efficiency in housing costs the NHS 1.4bn a year in treatment bills with the BRE estimating that addressing the hazards presented by excess cold can offer annual savings of £15bn if mitigated. These include aspects which undermine economic productivity relating to long-term care, mental health, and poorer educational attainment.

Element Energy (supported by UK CEH) conducted a technical report in 2020 to consider carbon emissions reduction pathways for West Yorkshire. West Yorkshire is more densely populated than many areas of the UK, with higher emissions from buildings and transport but a smaller percentage of emissions from agriculture and industry. The region faces specific challenges around land area constraints and heat decarbonisation in relatively old homes; it also has limited potential for negative emissions technology (e.g. BECCS, forest planting) to offset remaining emissions in the energy system.

Under the scenarios modelled in the carbon reduction report, West Yorkshire does not reach net-zero. The max ambition scenario modelled only forecasts an 82% reduction by 2038. However, this could be reduced further through increased ambition, more speculative technology, or system changes. Delivering net zero will require highly ambitious leadership and policy to drive extensive change across the economy. It requires over 660,000 domestic heat pumps to be installed, and total electricity demand is expected to increase by 72%, by 2038. Support will be required from national government, both in terms of policy and funding, as well as upgrades to the regional electricity infrastructure.

The below must happen by 2038 in the max ambition scenario to meet climate targets:

- Transport
  - Sales of zero emission cars to reach circa 50,000 a year by 2038
  - 80% increase in walking
  - Cycling to increased 20 times compared to today
  - Public transport capacity to increase by 55% compared to today
- Building and industry
  - Retrofit 680,000 to reach EPC C or better
  - 665,000 heat pumps installed (141/day from 2025-2035)
  - Hydrogen equipment developed and deployed for industry
- Land use and agriculture
  - 100% peatland restored to minimise emissions
  - 170 hectares of new forest planted
  - Diet change to reduce meat and dairy consumption by 32%

- Power
  - Solar PV and onshore wind to reach 820 MW (43MW/year from 2020-2030)
  - Energy from waste CCS deployed from 2030 (0.2 MtCO<sub>2</sub>/year by 2038)
  - Electricity infrastructure investment enabling 71% higher annual demand

The EEIG estimates that 190,000 jobs can be created by 2030 in energy efficiency and clean heat sectors, with opportunities to up-skill the workforce to meet the net zero challenge. Energy efficiency projects can also provide a levelling up opportunity by supporting jobs in every part of the country and doing more in the regions that need it most.

A structural solution to supporting building energy efficiency will reduce the need for expensive fiscal packages in the years ahead, helping to reduce public debt and inflation. There are few infrastructure projects that can do so much for economic growth, with a £3.20 return through increased GDP per £1 invested by Government.

There are clear examples of other environmental legislation that has fostered growth and prosperity. For example, increasing the charge for plastic bags to 10p in the Government's own scheme is expected to benefit the UK economy by over £297m over the next ten years. Better utilising the Waste Electrical and Electronic Equipment regulations could deliver significant financial gains. The Environmental Audit Committee and Green Alliance note that the UK could support eight to twelve recycling facilities and 50-200 more specialised waste re-processors, creating over £500m extra value and allowing for the extraction of critical raw materials such as lithium from batteries.

According to the EEA's 7<sup>th</sup> Environmental Action Plan, the EU aimed to boost the competitiveness of eco-industries and strengthen the market share of green technologies by 2020. Since 2000, eco-industries have outperformed the total economy of the EU in terms of creating economic prosperity and employment. Between 2000 and 2015, employment in eco-industries grew by about 47% compared with 6% for the overall economy. Moreover, the economic significance of the environmental goods and services sector grew in the same time frame, with an increased share of both GVA (from 1.6% to 2.3%) and employment (from 1.3% to 1.8%). Labour productivity in this sector is also higher than in the overall economy, an average of 25% more productive.

Harnessing the key opportunities that exist for clear market signals with a commitment to Net Zero delivery has the potential to produce economic growth, jobs, and prosperity across all sectors of the UK Economy that need decarbonising. However, the government needs a long-term, stable focus and clear policy and strategy direction to enable these markets to flourish. This is particularly important given that Local and Combined Authorities are instrumental to Net Zero delivery. To meet the mandatory climate targets that the government has set, it needs to be mindful that fossil fuels will inhibit a growth economy as we will continue to be dependent on rising oil prices. To

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Late movers who continue to invest in fossil fuel infrastructure over decarbonisation technology will be left with stranded assets. Countries that decarbonise fastest will profit most from the Net Zero transition and half of the world's fossil fuel assets will have become worthless as soon as 2036. Recent modelling has found the UK could add \$700bn to the value of its GDP under a net zero scenario by 2036.

*2. What challenges and obstacles have you identified to decarbonisation?*

There is a lack of recognition that climate change is an emergency, and that action must be prioritised accordingly. There is also a lack of capacity and capability around net zero across local government, businesses, and communities. This lack of dedicated capacity and specialist expertise slows progress, resulting in fewer projects being developed and delivered at the pace required. Furthermore, there is insufficient grid infrastructure, and high costs of upgrades means renewable/sustainable energy projects are either substantially delayed or not viable, impacting the economy and the nation's ability to weather increased energy costs. Additionally, the rural nature of some of West Yorkshire's districts means many projects – such as retrofitting off-gas grid properties and installing EV chargers – have higher upfront costs.

To deliver decarbonisation across the economy, West Yorkshire is reliant on policy change at the national level. The short-term nature of national policy is also a barrier to developing long-term, strategic approaches to decarbonisation. Significant investment is required from central government to deliver net zero, particularly to support the decarbonisation of transport and buildings. The short-termism of funding pots is also a critical barrier; short timescales to develop projects and put together funding bids, alongside tight delivery windows, reduces the ability for Local Authorities and other organisations to develop and deliver projects at the scale required. This has been seen recently with housing retrofit schemes. Lack of long-term funding certainty also inhibits the development of local supply chains, meaning Local Authorities have been unable to utilise all of central government's allocated funding for schemes.

The lack of funding for feasibility studies and project development support has resulted in net zero projects staying at 'idea stage' unable to progress, despite strong interest from stakeholders. A growing number of businesses are interested in net zero and reducing their energy bills, but they don't know where to start. Many of them require financial support to make changes to their business operations. Furthermore, tax incentives can encourage these businesses to take action on decarbonising. The current lack of incentives has resulted in an issue with supply chain capacity, especially within skills. The government's uncertainty on a continued commitment to net zero undermines industry's long-term confidence.

Delivering net zero will require facilitating behaviour change including shifts to active travel which is critical to ensure uptake of low carbon measures. Increased awareness, behaviour change, and incentives are critical to net zero, by building community cohesion and pride in place. People need to be aware of sustainable options and be incentivised to take action. To ensure a just transition that recognises existing inequalities, it requires building community capacity for the hyperlocal that is complemented and supported by national government. This means communities are a central part of routeways to skills, careers and can therein be involved closely in the improvement of the UK's productivity.

The introduction of schemes including the Green Homes Grant has highlighted the extent to which green jobs are already required and can hamper delivery of the transition to net zero. We must be confident that West Yorkshire's workforce is equipped with the skills necessary to transition to and operate within a net zero carbon economy. This is reliant on the actions of key stakeholder groups, who currently face high levels of risk:

- Employers may struggle to make the transition to net zero (either in their operations or services) because they struggle to recruit a workforce with the required skills, or access training to upskill existing staff.
- Employers also report struggling to make the leap to net zero adaptations and new technologies because of a lack of certainty and long-term investment.
- Individuals may not engage with training opportunities because there is no clear line of sight to employment for their investment, or because they face barriers.
- Courses become less financially viable for education and training providers to offer, because of low levels of interest. This also makes it difficult for education and training providers to invest in new skills and technologies to keep up with this growing and changeable market.
- To successfully meet the immediate and longer-term challenges of the transition to net zero, it is important that risk is mitigated for each of these stakeholder groups whilst encouraging behaviour change.

We would like to see schemes come through modelled similarly to the Skills Bootcamp Wave 3. The government gave Mayoral Combined Authorities priority with this scheme and guaranteed funding which enabled successful delivery of the scheme's programmes and projects.

The transition to net zero will bring demand for new skills whilst seeing demand for some skills fall dramatically. It is therefore important, for both individuals and the productivity of our region, to support individuals to adapt their skillset to suit West Yorkshire's changing labour market, ensuring a just transition to net zero. Research by the London School of Economics suggests that 60% of jobs in the construction sector are likely to be affected by the transition to net zero, with around half being transition exposed (falling skills demand) and half being transition aligned. The same



study estimates that just over 11% of the Yorkshire and the Humber workforce will see increased demand for the skills they use in their jobs.

*3. What opportunities are there for new/amended measures to stimulate or facilitate the transition to net zero in a way that is pro-growth and/or pro-business?*

Certainty of long-term policy aligned with place-based approaches would help create opportunities for business by stimulating the local supply chains for regional economic growth. This certainty can increase the uptake of public and private investment. For example, the UK's announced phase out of new sales of internal combustion engine cars by 2030 generated a surge in private investment from industry and the public, at a minimum cost to the government. We must stick to the current timelines for phasing out fossil heating system from new and existing properties, whilst taking the necessary steps to ensure affordability within low-income and vulnerable households.

The government could scale-up existing schemes focused on those in or at risk of fuel poverty, such as the Social Decarbonisation Fund, the Homes Upgrade Grant, and the Sustainable Warmth competition schemes. Furthermore, there needs to be a catalyst to stimulate a market for the Boiler Upgrade Scheme and Public Sector Decarbonisation Scheme. It is crucial that any new investment is committed over a sufficiently long period of time to provide confidence for the supply chain to positively respond and increase delivery capability.

Increasing consumer demand for sustainable products and services will create new markets and build existing ones. Additionally, public procurement can be utilised to develop supply chains and new markets that enable the delivery of net zero.

A focus on quality jobs and high-standard training opportunities will be critical for ensuring effective implementation. Securing outcomes which are desirable for families, workers, and businesses supports a high-wage, high-skill economy. Industry, government action, and investment occupy important roles in setting standards to ensure high quality jobs and supporting a trained workforce, as set out in detail in a recent report by Electrify Heat and the TUC.

A current barrier for some households is the upfront cost associated with home decarbonisation. There is a focus on ways of ensuring that low income and fuel poor homes, particularly those off the gas grid, are fully supported to benefit from the clean heat transition. In this context, the government should explore scaling up existing schemes focused on those in or at risk of fuel poverty such as the Social Housing Decarbonisation Fund, the Homes Upgrade Grant, and the Sustainable Warmth competition schemes.

Innovative green finance mechanisms, tax incentives for businesses, embedding decarbonisation plans for business or net zero embedded support for community

businesses, can all encourage a mindset shift, from focusing on short term, immediate pressures, to a longer-term view.

Supporting green financial and business model innovation can reduce upfront costs. This could include introducing a Green Stamp Duty to encourage people to make home retrofits. The government can also help advance recommendations made by the Green Finance Institute to turn up the dial on investment in zero carbon heating. This includes demand aggregation finance, a 'salary sacrifice' scheme, and heat as a service. These tools can help reduce and spread upfront costs for households, while building the economies to bring down technology and installation costs. Furthermore, it can help bolster the UK's position as a leader on green financial innovation.

The UK Infrastructure Bank could play an important role in developing an attractive consumer offer inspired by the successful German KfW programme and offered via retail banks. To replicate Germany's success, long-term cooperation across government departments, as well as with industry and local delivery partners is crucial. In the near-term, the Treasury could provide public funding to support a trial KfW style loan with a high-street bank.

#### *4. What more could government do to support businesses, consumers and other actors to decarbonise?*

At a strategic level, supporting the development of place-based approaches to decarbonisation is critical to ensure local ownership and that solutions are right for the area. There are a number of national policy changes required to support this. A central government messaging framework for climate action and decarbonisation is needed, which must convey the urgency and provide clear communication around the climate emergency. The government must ensure delivering net zero is embedded in all government strategic documents. For example, it is noted that decarbonisation is largely missing in the Levelling Up Missions.

There is a critical need for further funding to support the development of net zero projects, linked to the BEIS-funded Net Zero Hub Network. Currently, there is limited resource to help support the development of net zero projects and a lack of funding for feasibility studies. This has resulted in fewer projects moving to investment-ready stage which significantly impacts the ability to meet net zero targets.

National procurement guidelines are needed to accelerate decarbonisation of supply chains. For example, the Public Contracts Regulations (2015) does not allow for efficient procurement processes to tackle the climate emergency. There needs to be a fundamental change in the national operating model, a clear strategy that invests in a net zero economy now, not later.

Government must re-introduce more competitive feed-in tariffs for renewable energies to support customers and businesses with decarbonisation. Moreover, government

should further support and fund programmes such as the Resource Efficient Business programme (REBiz). This is currently in operation across the Leeds City Region Enterprise Partnership to support SMEs to become more resource efficient and adopt circular business models and practices. To support businesses to decarbonise, the government must introduce a comprehensive SME business efficiency programme based on the various ERDF supported local authority delivered projects around England. Furthermore, this needs to be coupled with skills support to underpin and incentivise business adaptations.

Ultimately, the government must provide more funding that is available over a longer-time frame to effectively support decarbonisation. Ideally this would be provided via long-term devolution settlements for net-zero at the Combined Authority level. This would provide stability in funding for net-zero while addressing the issues that are caused by short-term funding provision that pits area against area. Local areas in the majority of cases know the interventions that need to be implemented and therefore should be given the freedoms and flexibilities to apply a location specific approach to decarbonisation. If bids and grants are to continue to be offered, there must be plenty of notice to apply to avoid wasting local resource and capacity. Funding models require reconsidering to enable individuals from all financial situations to access capital to decarbonise their households through affordable loans and grants. Furthermore, the government must provide tax incentives for businesses to invest in energy efficiency measures and renewables.

The government must send strong signals into the market that the UK is ambitious for renewable energy expansion to stimulate investment in the economy. The government must stop funding fossils fuels immediately and simultaneously commit to a net zero strategy to start developing the necessary infrastructure and capacity to achieve it. Moreover, the government must bring forward new planning policy so that new buildings will not require retrofitting, and new housing developments are built with communities in mind, with 15-minute neighbourhoods, emphasising active and public travel.

*5. Where and in what areas of policy focus could net zero be achieved in a more economically efficient manner?*

Fundamental changes in energy system governance are essential to get to net zero. There needs to be a clear assignment of roles and responsibilities across the system, so that each key player understands their statutory responsibility to deliver net zero. Changes in governance are also required to ensure that grid infrastructure upgrades are more affordable and that District Network Operators do not charge multiple organisations for the same upgrade. Changes are also needed to enable and support the development of local energy markets. Furthermore, the development of Local Area Energy Plans are a crucial step in ensuring net zero is delivered in an economically efficient and strategic way.

With regards to planning policy, the government must accelerate the implementation of heat network zoning and the ability for local authorities to mandate connection for developers, reducing energy costs for business tenants. The government must bring forward the Future Homes standard, in order to incentivise landlords to bring their homes up to a minimum standard of energy efficiency. This is critical to avoid wasting time, effort and resources in developing net zero solutions in silos. Furthermore, an acceleration of rail decarbonisation via electrification and increasing capacity on the railways (including for freight) will have an instrumental role to play in the decarbonisation of transport.

We require long-term certainty through regulations to be set out provide fertile grounds for private investment from homeowners and industry, this was not set out sufficiently in the Heat and Buildings Strategy. Moreover, growing skills and supply chains will underpin high-quality delivery and support green jobs and industries, providing a return on investment which will deliver into the decades ahead. Moreover, the government must position projects to access private sector investment rather than solely relying on government funding, for example our Net Zero Regional Accelerator project aims to provide support for project development activity that will enable net-zero focussed projects to reach the point of implementation and ultimately investment by the private sector. Finally, the government must support affordability for low-income households and help spread or reduce upfront costs through stimulating innovative business models and financial products and services. This can be further reinforced through government 'prompts' such as Energy Saving Stamp Duty and tax incentives for homeowners to encourage retrofits.

There is a lot of attention currently focused on the potential to deploy hydrogen in homes, but there is a growing body of evidence to suggest that at the current time, heat pumps are much more economically efficient than hydrogen. This data should be considered in outlining policy focus.

The Greater London Authority undertook a comprehensive study considering the role of hydrogen. The report clearly articulates some of the current challenges for the deployment of domestic hydrogen. Conventional boilers could only burn a blend of around 20% hydrogen and 80% methane, burning 100% hydrogen would require new boilers to be installed simultaneously across all parts of the network that were switching to supply pure hydrogen. The carbon neutrality of hydrogen relies on carbon capture and storage, which is yet to be demonstrated at scale in the UK. Production of low emission hydrogen is possible via electrolysis powered by renewable electricity, however, the overall efficiency of heating would be less than 70% before accounting for distribution losses, compared to 260-300% for a typical heat pump.

Hydrogen has a role to play in the transition to Net Zero, particularly for some 'hard to decarbonise' sectors. But it is only one part of the solution, and it is important to prioritise alternatives which are less reliant on fossil fuels and carbon capture technology and represent an efficient use of resources. We should continue to look

into how hydrogen can be scaled up as a more sustainable solution. However, we need to prioritise technology available today, rather than relying on technological developments which aren't yet widely available. Therefore, hydrogen should be part of place-based solutions where it makes sense and local authorities / Combined Authorities need to be involved in conversations about the deployment of hydrogen infrastructure.

*6. How should we balance our priorities to maintaining energy security with our commitments to delivering net zero by 2050?*

It is critical that the UK stays within its carbon budget aligned with the Government's commitment to the Paris Agreement. Local Area Energy Planning can help ensure that local areas deliver net zero and remain within their "fair share" of carbon budget, whilst also driving investment into renewables to maintain energy security.

Investment in low carbon energy supply provides new jobs and creates more benefits to the economy. Increasing community energy ownership can provide local energy security.

Energy reduction must be key to Government's approach to net zero, this will both support carbon reduction and energy security. Accelerating the deployment of heat pumps can reduce the UK's exposure to volatile international gas markets. Efficient heat pumps can reduce heating bills and relieve the cost-of-living pressures. They boost energy security and lower bills moving households from volatile fossil fuel markets and onto electricity, which is increasingly sourced from home-grown, clean renewable energy. Heat pumps are a super-efficient way to heat our homes. For every 1kW of electricity, they produce 3-4 kWh of heat, an efficiency of 300-400%, compared to 90% for a new gas boiler. Heat pumps are a key tool being used by other countries in response to the energy crisis. A war-time approach to boost clean, resilient heat has been initiated by the US, Germany and the Netherlands to quickly transition from Russian gas and insulate households from volatile international gas markets.

The UKERC estimated in 2017 that by 2035 cuts of more than half of current energy consumption could be achieved through the combination of energy efficiency improvements, heat pumps and heat networks. This represents the technical potential. In their cost-effective option, 25% can be reduced, still resulting in a massive 140 TWh saving per year in total.

Making buildings more energy efficient for net zero has the advantage of contributing to the UK's energy security goals, not conflicting with them. Heating and powering buildings accounts for 40% of the UK's total energy usage. Every unit of energy avoided is one less unit that has to be supplied from homegrown energy sources, or from volatile imports. Prioritising the energy efficiency of buildings therefore drives energy security at both a national and personal level, and in the immediate-term reduces the likelihoods of blackouts.

*7. What export opportunities does the transition to net zero present for the UK economy or UK businesses?*

Countries around the world are turning to heat pumps in response to the gas crises, and there are opportunities for the UK's heating manufacturing capacity to be harnessed to create export opportunities. The European Commission's REPowerEU plan targets 20 million heat pumps to be installed by 2026, and nearly 60 million by 2030. Furthermore, the Commission proposes a range of measures to accelerate and incentivise the roll-out of heat pumps, such as tougher requirements on buildings which should see an end to 'standalone' fossil fuel boilers by 2029.

Germany has launched the 'decade of the heat pump', with an 'Easter Package' launched in April 2022 proposing new ambitious targets. 80% renewable power and 50% renewable heating by 2030, with all new heating systems running on renewables by 2025. To facilitate planning and permit processes, investments in renewables have been labelled as 'overriding public interest'. Further measures include increasing energy efficiency standards for new buildings, solar roofs 'should' become standard and setting heat pump installation targets of 500,000 installations annually until 2024 and 800,000 per year after. This encourages companies and workers from the construction sector to take part in upskilling training sessions. All this has helped incentivise private investment. For example, German manufacturer Viessmann, one of the leaders of European heat pumps market, announced in May an investment of 1 billion euros in the next three years to expand its heat pump and green climate solutions portfolio amid growing demand.

The US announced they would make use of the Defence Production Act to accelerate their domestic production of clean energy technologies, including heat pumps and solar panels. The Act gives the US president the power to order companies to produce goods and supply services to support national defence. It was created to allow for quick industry response in times of war, but has more recently been used during the pandemic to produce face-masks and vaccines. The Act's authority, with funding approved through Congress, will allow the federal government to invest in companies that can build clean energy facilities, expand clean energy manufacturing, process clean energy components, and install clean energy technologies for consumers.

The UK should act fast to ensure it doesn't miss out on this substantial clean tech opportunity. The UK can support domestic companies working on innovative business models, cutting-edge manufacturing (such as modular homes manufacturing) and financial products and services to underpin a clean heat mass market.

Questions for local government, communities and other organisations delivering net zero locally

*24. What are the biggest barriers you face in decarbonising / enabling your communities and areas to decarbonise?*

There are three key challenges inhibiting local decarbonisation: lack of certainty and government policy, short term and competitive funding, and issues with skills and supply chains.

Funding and strategy impact on our ability to deliver net zero with funding and capacity as our two largest barriers to success. By combining long-term, non-competitive funding, capacity development and support with a clear strategy for Local Net Zero Delivery could enable local authorities to accelerate progress.

Local authorities have responded positively to government programmes and initiatives, namely the Public Sector Decarbonisation Scheme. However, much of this support came in the form of competitive funding round, which is not systemic, consistent or long-term. Moreover, existing funding doesn't test out new finance models or approaches, meaning innovation is dependent on government funding and is not replicated or transferred elsewhere.

The constant last-minute rounds of bidding competitions for short-term project results in huge inefficiencies for local government, lots of wasted effort discussing and coordinating bids, multiple monitoring methods and criteria for effectively the same outcomes. We require a much longer-term approach to the distribution of funding, more autonomy and trust from central government to target the funds in line with our local needs and priorities. Not only would this make delivery more efficient, but it would enable numerous co-benefits of investment in skills and training of local supplier and partners to be more fully developed.

The current approach to local Net Zero delivery is not enabling. Despite the government saying that they don't want to be prescriptive, the criteria for funding can be very tightly drawn, limiting the ability of local authorities to transform places, establish long-term programmes, and build up a skilled local workforce, which are all essential for a successful, just transition.

There are several challenges in the development process across the following sectors;

- Buildings
  - The power to implement energy efficiency measures sits with a landlord or the property is physically unsuitable for retrofit measures
  - Apparent lack of available, trained and trusted companies for implementing changes to properties
  - Upfront costs of energy efficiency measures with lack of financial support available
  - Balancing the loss of greenfield land and mature trees with the economic and social demand for new residential and commercial development as we progress towards 2038
  - The reliance on national planning policy and building regulations to match net zero and climate ready ambitions
- Energy

- Absence of incentives and funding for renewable energy technologies for either new developments, private homeowners, or commercial interests
- The cost of renewable technologies for domestic properties and an understanding of what is available and suitable for installation
- The rising cost of energy bills and energy poverty
- The limitations and constraints of energy generation and distribution infrastructure, such as lack of capacity to meet demand
- Perceived lack of available, trained and trusted companies to instal renewable technologies
- Unable to have smart meters due to location of electric meters
- Natural Environment and Biodiversity
  - Lack of green infrastructure, nature-based solutions and green space considerations in master planning and new developments.
  - Balancing the loss of greenfield land and mature trees with the economic and social demand for new residential and commercial development.
  - Perception that the quality and safety of green space is declining over time.
  - Reducing and reversing habitat fragmentation
  - Restoring moorland / peatlands to prevent loss of carbon storage and reduce the occurrence of wildfires.
- Sustainable Food and Agriculture
  - The cost-of-living crisis and the lack of affordability of more sustainable, low carbon food choices.
  - Lack of interest in behaviour change and evolving long-standing diets and food choices.
  - There is a huge demand on land for multiple different uses, with limited opportunity and suitability to grow food locally.
  - High levels of uncertainty in the agricultural sector due to recent and expected changes in subsidy payments and environmental policy.
  - Damaging the local agricultural industry by reducing meat and dairy consumption.
  - Policies and practises which undermine efforts to reduce food waste, such as sell-by dates, cosmetic standards, and overproduction/over-ordering.
- Transport
  - Lack of appropriate infrastructure to facilitate transport modes that are an alternative to private combustion engine vehicle use.
  - Costly and dis-connected public transport offering, especially in rural areas.
  - Active modes of transport such as cycling is unsafe on most roads.
  - The region's topography and rural geography limits the uptake of active modes of transport i.e., too hilly.



- Contradictions of approach: free EV parking encouraging private vehicle use therefore enhancing congestion.
- High congestion on roads; standing polluting vehicles and a barrier to modal shift.
- EV cars and e-bikes are not currently affordable to most residents.
- Waste
  - It is predominantly cheaper to buy new than repair items.
  - More durable, higher quality products are less affordable.
  - Achieving a transition to reducing waste and adopting more sustainable consumer practices without compromising economic growth.
  - Evolving consumer behaviours to reduce waste – such as fast fashion.
  - Evolving construction industry practice to adopt circular economy principles and reduce waste.
  - Lack of appropriate food and glass waste collection and disposal infrastructure and mechanisms
- Water
  - Lack of motivation and awareness to implement water saving measures and why this is necessary.
  - Upfront cost of water efficiency measures with lack of financial support available.
  - Flood protection and water efficiency measures are not in the control of the occupant due to living in a rented property.
  - Belief that water efficiency should not be a concern due to the amount of rainfall we receive.
  - Absence of a whole water cycle management approach.

*25. What has worked well? Please share examples of any successful place-based net zero projects.*

The District Heat Network in Leeds is an excellent example of a successful place-based net zero project. The scheme will provide low carbon heat and hot water to 1,983 council homes which will save tenants money on their energy bills whilst reducing the city's carbon footprint. This project also has wider connotations for the community, providing local employment and training opportunities. So far, the project has helped to employ more than 430 people in the local low carbon sector, including 36 apprentices. It is also being used to educate local schools on climate change, with the Leeds PIPES network being named by a local academy.

The Abbey Road Retrofit pilot project in Kirklees is another great example. Eight properties were chosen, and work began in August 2021. The project thermally insulated the properties by fitting loft, cavity and external wall insulation, they will have new windows, doors and a new roof. The plan is to monitor the performance of these properties which will then inform future schemes carried out.

The government could scale-up existing schemes focused on those in or at risk of fuel poverty such as the Social Decarbonisation Fund, the Homes Upgrade Grant and the Sustainable Warmth competition schemes. Furthermore, there needs to be a catalyst to stimulate a market for Boiler Upgrade Scheme and Public Sector Decarbonisation Scheme. It is crucial that any new investment is committed over a sufficiently long period of time to provide confidence for the supply chain to positively respond and increase delivery capability.

The Resource Efficient Business (REBiz) programme supports SMEs to become more resource efficient and adopt circular business models and practices across Leeds City Region. The government must introduce further support and fund programmes based on the various ERDF support local authority delivered projects across England.

Bradford has taken targeted action to improve air quality through the Clean Air Zone (CAZ). Through the use of a daily charge entering the zone, the Council will encourage people and businesses who own the most polluting vehicles that travel through the District to consider upgrading their vehicles to meet their new air quality standard. All money collected from drivers of the most polluting vehicles, either from the Clean Air Zone charge or fine for non-payment of the charge will be invested in measures which improve air quality in the district. This could include support for zero emission buses, further help for residents and businesses to upgrade their vehicles, the development of hydrogen in the district, and support for schools to reduce emissions in their areas.

*26. How does the planning system affect your efforts to decarbonise?*

The biggest issue is that there is no statutory duty to pursue Net Zero through planning. To resolve this, there needs to be a wholesale review of the Town and Country Planning Act to bind planning with the Climate Change Act. Planning policy and building regulations are out of date, housing is currently being delivered that will require retrofitting in the future. New housing should be built fabric first, with solar panels, heat pumps and energy storage facilities as required. No new fossil fuel systems should be installed in new builds. New homes should be built around active travel and public transport infrastructure to reduce the requirement for private vehicles.

The provisions of the Planning Acts and the Climate Change Act need to be better connected so that planning can deliver emissions reductions. This means strengthening the policy guidance and the introduction of a legal provision for planning on climate change. This would function as the Net Zero test on planning. Provisions that define and require adaptation resilience standards to be met in planning decisions must also be put on a legal footing.

The National Planning Policy Framework (NPPF) does not give climate change the priority which the science demands. Climate change is included in paragraph 8 at the end of a long list of other environmental considerations. The most significant part of national policy on climate change is included as a footnote which is not a commensurate way to deal with a global crisis. The publication in July 2021 of the

revised NPPF was an opportunity to show how planning can play a crucial role in climate mitigation, for example, by strengthening the policy presumption against fossil fuel extractions, but the revised document ignores the implications of the 6<sup>th</sup> Carbon Budget Order. National policy sets out detailed methodologies for forecasting many issues like housing, waste and aggregates. There is no such guidance for carbon reduction. The NPPF also fails to prioritise key climate impacts such as surface water flooding and overheating.

Due to changes brought in by permitted development, where full planning permission is no longer required, planning authorities have no way of ensuring that the climate emergency is reflected in decisions. The current prior approval process does not allow local authorities to consider the impact of development on carbon emissions or overheating.

Taken together these problems help account for why only a minority of local plans have an effective approach to carbon reduction; why carbon intensive development, such as coal extraction, is still being proposed; and why so many decisions on the location and design of new homes will require expensive retrofitting. If we are to build back better, we need to urgently transform the built environment to both reduce emissions and be resilient to climate impacts.

To address these considerations, we need Building Regulations and the NPPF to mandate zero carbon new buildings with immediate effect and give priority to cycling and walking in all transport schemes.

*27. How can the design of net zero policies, programmes, and funding schemes be improved to make it easier to deliver in your area?*

The following criteria need to be applied to all policies, programmes and funding schemes in order for Net Zero to be delivered successfully.

There needs to be longer-term (at least five years) and non-competitive programme funding for delivering Net Zero. To enable a true place-making approach there needs to be multi-sector engagement with strategic stakeholders (e.g. District Network Operators) and recognition of the differences in geography and energy sources when considering appropriate technologies. There cannot be a one size fits all approach, we must recognise the distinct challenges faced by rural and urban areas and tailor interventions accordingly. We require clear guidance from government regarding roles and responsibilities to deliver across local and national government.

West Yorkshire would support the introduction of a National-Local Net Zero Framework for national, regional and local government. This would enable clear outcomes and direction, providing additional powers where needed, and allow for faster delivery in ambitious areas. The Local Net Zero Forum is welcome, but it needs to have teeth, with a dedicated Net Zero Delivery Unit at its disposal. This requires ministerial oversight and to build on the recommendations that will be delivered by the

Forum's task and finish group working to establish a clear delineation of roles and responsibilities.

*28. Are there any other implications of net zero or specific decarbonisation projects for your area that the Review should consider?*

As outlined by UK100 research and the Climate Change Committee, there is a need for a much more detailed retrofit section with measurable interim targets, to be included in the Net Zero Strategy. This review offers an opportunity to redress this current omission.

There are some areas where minor legislative amendments or updates would make a material difference to the ability to deliver local Net Zero. One example would be Energy Performance Certificate (EPC) reform. EPCs do not currently provide a good representation of the carbon performance of a building in operation. The production of an EPC is a tick-box exercise based on the presence or absence of building and energy supply elements, rather than how well they perform. Some elements (e.g. underfloor insulation, some roof insulation) cannot be inspected and are typically ignored in the assessment. For traditional and rural properties, the recommendations frequently include external wall insulation which is technically unsuitable for these building types. This also speaks to a broader point related to the need to better understand and differentiate between rural and urban contexts in local Net Zero delivery.

To address these issues, the EPC system should be revised to be more accurate and better reflect in-use energy performance, including a reflection of the technical limitations of energy measures in traditional and historic buildings. Additionally, a long term and flexible funding scheme should be introduced for landlords and private householders to enable them to meet the EPC requirements.

The recent Growth Plan stated that consenting for onshore wind was going to be brought in line with other infrastructure. No further details were given and what this means in practice for local authorities and the deployment of local onshore wind projects is ambiguous. The Net Zero Review should clarify the government's position on new onshore wind as an urgent priority.

The Levelling Up White Paper and the subsequent Levelling Up and Regeneration Bill have not adequately integrated local Net Zero delivery. The future of the Levelling Up and Regeneration Bill is currently uncertain, given the introduction of the Infrastructure and Planning Bill, the relationship between the two pieces of legislation is unclear. The commitment to Investment Zones in the Growth Plan does not reference or link provision in any way to Net Zero. Net Zero delivery should be central to all these developments, and the Net Zero Review is an important opportunity to provide clarity and emphasise the need for cohesive local development and Net Zero strategies.

The Net Zero Review should give assurances that the Energy Bill will continue its legislative journey to provide stability for a sector which requires significant attention in terms of Net Zero delivery. In particular, the Review should confirm that the Future Systems Operator/Independent System Operator will be retained. More consideration of the strategic relationships that will be required to deliver Net Zero effectively (for example, between Distribution Network Operators and local authorities) should be acknowledged.

The economic costs of climate adaption need to be better integrated into the Net Zero Review.

There needs to be confidence in the market. That there is a Net Zero Review at all, sends a bad signal. As an outcome of the Review, the governments need to make a clear statement that it remains committed to its mandatory targets for Net Zero delivery.

Finally, there needs to be a consideration regarding how decarbonisation in protected landscapes can preserve the heritage and natural assets whilst also delivering net zero at pace. In the transition to net zero, we must also ensure that interventions support improvements in biodiversity, as we are facing a dual crisis. Rapid climate change and unprecedented biodiversity loss.

## Find out more

[westyorks-ca.gov.uk](http://westyorks-ca.gov.uk)

### **West Yorkshire Combined Authority**

Wellington House

40-50 Wellington Street

Leeds

LS1 2DE



All information correct at time of writing.

