



north east & yorkshire  
**NET ZERO HUB**

ANNUAL REPORT 2024

# Putting the North East and Yorkshire on the map for **clean energy**



**Solar powered schools**  
in the North East

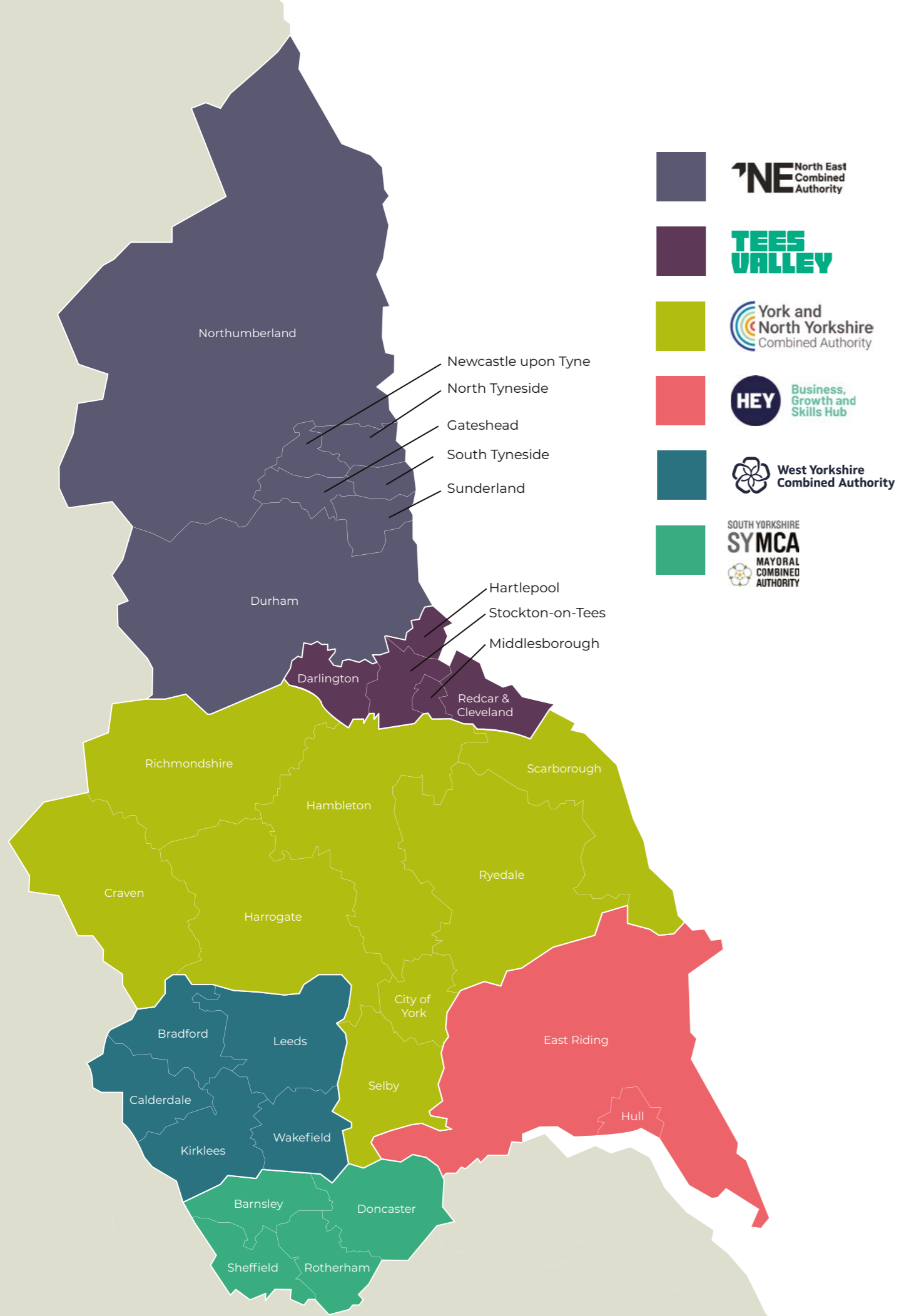
**Renewable energy powered  
leisure centres** in Tees Valley

**Sustainable building insulation**  
in North Yorkshire

**New approaches to funding Net  
Zero projects** in Hull and East  
Yorkshire

**Innovative energy advice**  
in West Yorkshire

**Low carbon public buildings**  
in South Yorkshire



## The North East and Yorkshire Net Zero Hub is a collaboration of six regional authorities

We are part of a national network of five Local Net Zero Hubs established and funded by the Department for Energy Security and Net Zero. We provide free strategic and technical support to local authorities and communities to take clean heating and energy projects from the earliest stages of feasibility and development to investment and delivery.

Our objectives are:

- **Increasing** the number, quality and scale of local low carbon energy and clean heat projects in the North East and Yorkshire
- **Enabling** local areas to attract private or public finance for energy projects
- **Raising** awareness of the opportunity for, and benefits of, local energy investment
- **Supporting** regional co-ordination and collaboration between local partners and sharing local learning
- **Collaborating** with government departments on major net zero programmes

Our partners have agreed that our strategic priorities are:

- **Renewable Energy Technologies**
- **Circular Economy**
- **Heat Decarbonisation**
- **Natural Carbon Sequestration**

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# Creating clean heat and energy for and in the North East and Yorkshire

We are pleased to share with you our second Annual Stakeholder report, which sets out how we have been working to enable, inspire, facilitate and accelerate Net Zero across the North East and Yorkshire and highlights some key achievements from the past year.

Local areas and the communities they serve have big ambitions to meet their energy needs but sometimes lack the capacity, resources and specialist skills to develop and deliver the interventions necessary to achieve them.

Local Net Zero Hubs were created to meet that need.

*The North East & Yorkshire, with its diverse landscapes and industrial heritage, has become familiar with the adverse effects of climate change and understands the significance of decarbonising infrastructure, buildings and jobs. We are here to help you drive forward local net zero, whether by providing additional skills and capacity to develop viable projects, signposting to and sharing best practice or coordinating programme delivery.*

*The dedicated Hub team has been working hard across the whole region to deliver a number of activities and programmes. Here we look back with satisfaction and pride on some of the key achievements of the last year and look forward to continuing to work with you, our valued stakeholders.*

Karen Oliver-Spry, Hub Manager

## Supporting our Region

This report sets out how we are doing that – and how much progress we, and most importantly, our partners have made.

It sets out how over the past year we have:

- Supported over 100 energy generating projects across 26 local authorities.
- Produced decarbonisation plans for over 70 public buildings
- Made energy efficiency improvements in over 8000 homes
- Supported the creation of net zero jobs
- Saved 300,000 tonnes of carbon emissions
- Overseen six innovative energy efficiency advice pilots
- Produced research setting out the North East and Yorkshire's retrofit skills needs – and how to meet them

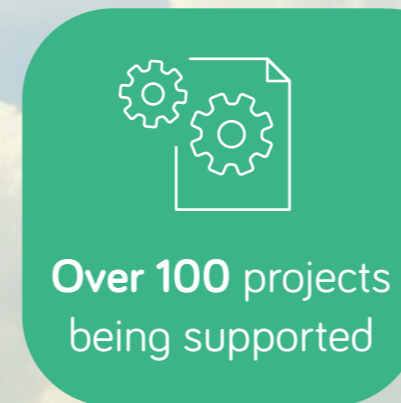
This report explains how we are delivering across four key themes:

- 1 Developing clean heat and energy projects in partnership with local authorities
- 2 Improving the energy efficiency of homes and buildings across our region
- 3 Supporting communities to generate clean energy and heat where it is needed and which they benefit from
- 4 Generating and sharing the knowledge the North East and Yorkshire needs to inspire and inform successful energy projects



*We hope that in turn you will be inspired to pursue new projects and ideas for accelerating Net Zero ambitions – and we stand ready to help you realise them. Contact us to see how we can help.*

## Developing clean heat and energy projects in partnership with local authorities



The Hub was created to increase the number, quality and scale of energy projects being delivered across the North East and Yorkshire.

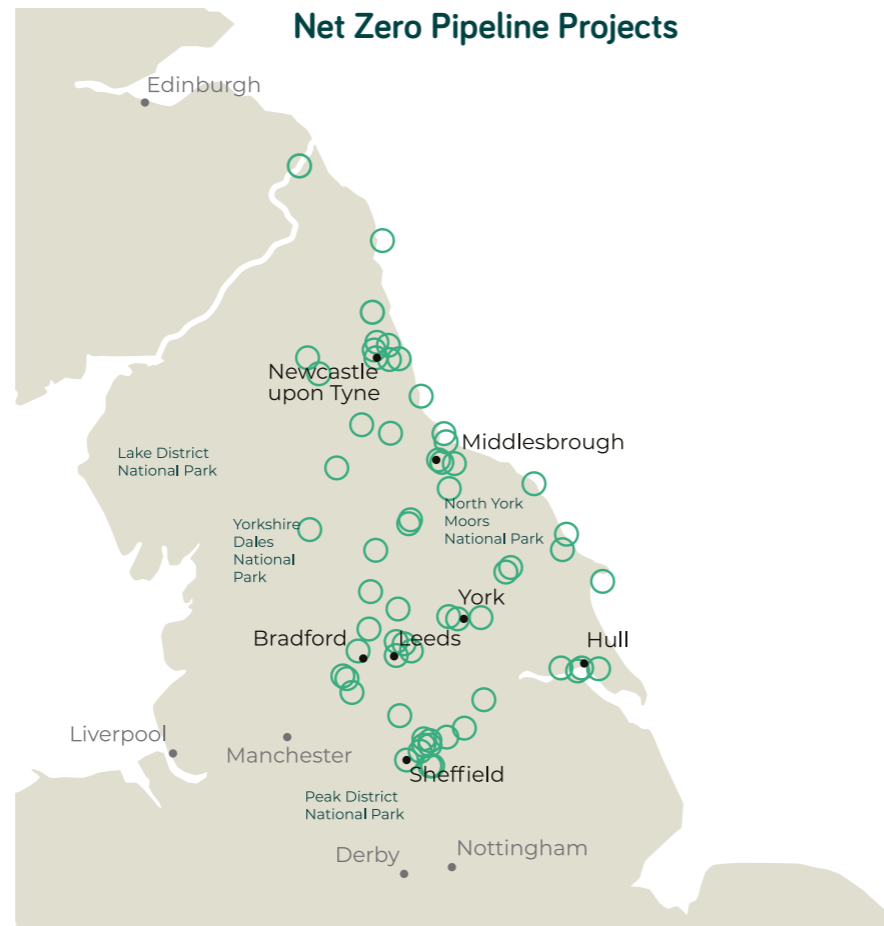
We are here to help projects get from idea to investment – making the most of local resources and strengths to meet our region's future energy needs and providing local areas with the capacity, connections and expertise to accelerate and achieve their Net Zero ambitions.

£798.28M

Total Project Value

373,781

Carbon Savings (tCO<sub>2</sub>e)



## Decarbonisation Pathways

The most effective way for local areas to set out a roadmap to Net Zero is to create a Decarbonisation Pathway.

These are evidence-led, data-driven assessments of local area's future energy needs alongside recommendations for the most effective ways of meeting them. These plans can also help develop portfolios of investable projects to attract private funding and support the

necessary development of the energy transmission networks.

Our support has played a central role in the development and delivery of decarbonisation pathways across the North East and Yorkshire, including Local Area Energy Plans in both Calderdale and York and North Yorkshire which are viewed nationally as best practice. The latter has also secured government funding to pilot a new approach to public-

private delivery vehicles for energy projects in a parallel programme administered by the Greater South East Net Zero Hub.



## Local Capacity Support

A key way we help local areas develop clean heat and energy generating projects is through what we call Local Capacity Support.

This sees dedicated staff funded by the Hub, working within each of our six Combined Authority partners, to help them and their constituent local authorities work on fundable and investable projects they may otherwise have not been able to develop or deliver by themselves.



## Attracting Commercial Funding

One of our core objectives is to support the creation of commercially investable local Net Zero projects. This work has gathered pace in the past twelve months with an external review of our processes for delivering on this objective and specialist training for our team.

Alongside our partners at the West Yorkshire, South Yorkshire and North East Combined Authorities we also partnered with the Cities Commission for Climate Investment (3Ci) for our first

Regional Investment Forum. This major event gave local authorities from across the North East and Yorkshire the chance to better understand how local Net Zero projects

can attract commercial investment direct from funders and to showcase their pipeline of emerging local projects to potential investors.



Case Study 🔍



Hub research has helped Hull and East Yorkshire Business Growth and Skills Hub to develop a pilot project which will assess the carbon impact of its investments and delivery, placing a financial value on carbon emissions – in particular the investment local authorities will have to make to respond to climate change and its impact on the lives and livelihoods of local people.

The research makes it easier for local authorities to make the case for investments such as East Riding Council's solar carport – believed to be the first in the country in the public sector.

The carport, at Driffield leisure centre – which is not a Hub project – generates 52,200kWh of electricity for both the centre and customers charging their cars there, reducing the centre's carbon emissions by nine tonnes and its electricity bills by almost £20,000 per year. The installation also brings charging points to a rural area.

Case Study 🔍

The Tees Valley Net Zero Strategy sets the aim of making the publicly-owned Teesside International Airport the UK's first Net Zero airport – and that ambition is being accelerated with the Hub's Local Capacity Support.



The Hub's Tees Valley Regional Project Manager oversaw delivery of a Decarbonisation Plan for the airport. The plan found that much of the terminal building dates back to the 1950s – describing it as “poorly insulated” or “uninsulated” with some areas prone to “over-heating”.

The airport's heating system was found to be “very old” and “identified as being installed when the building was constructed” meaning that it has “surpassed its end of life”.

The plan included eight recommendations for reducing the site's energy and heat consumption and cost, making the building more comfortable and energy efficient – two of which will cost nothing to implement!

Combined, the recommendations could reduce emissions by 332 tonnes of carbon every year.

Case Study 🔍

Our Energy Project Enabling fund helped install 232 solar panels on the roof of a South Tyneside school which are set to generate over 90kWh of electricity a year, saving almost 19,000kg of carbon and cut the school's energy costs.



Facilities at Keelman's Way school like the swimming pool, sensory and cookery rooms that support the personal development and education of its pupils – many of whom have learning difficulties – are energy intensive, and the school was keen to see how it could save on costly energy bills and cut carbon emissions.



Energy efficiency measures installed at **5357** homes under SHDF2.1



**£82m** of funding secured



**4324** people given innovative energy advice



Decarbonisation of **70** public buildings supported

## Improving the energy efficiency of homes and buildings across our region

Net Zero begins at home. There's no point generating clean heat and energy that goes straight out of the window.

Residential buildings account for 30% of the UK's energy demand and as much as 25% of carbon emissions. Energy efficiency is also the best approach to reducing fuel poverty and improving the health and wellbeing of people across our region, contributing to warmer homes and reduced energy bills.

The Hub has played a key role in leading a number of major retrofit programmes across the North East and Yorkshire in the past year – building on almost five years of coordinating retrofit programme delivery across the region.

This year also saw us undertake leading research to evaluate approaches to retrofit programme delivery from the perspective of those involved, from the Local Authorities delivering and the businesses undertaking the work to the residents benefiting from the measures and reflecting change in attitudes over a year.

The report found that government-funded programmes administered locally by the Hub – including Green Homes Grant and the Home Upgrade Grant – have **“injected vitality into the retrofit landscape (and) undoubtedly spurred progress in retrofit efforts”** with the Hub's performance in this area described as **“excellent”**.

The report also provided insights and recommendations to help understand how improvements can be made to the domestic retrofit process – in the North East and Yorkshire and around the country.

## Social Housing Decarbonisation Fund

A consortium led by the North East and Yorkshire Net Zero Hub has successfully attracted funding from the Social Housing Decarbonisation Fund Wave 2.1 to deliver an £80 million retrofit programme across the North East and Yorkshire. This is made possible by a £32.4 million grant from the Department for Energy Security and Net Zero and £48.2 million from consortium partners to deliver the £80.6 million scheme to 5,525 homes. The SHDF2.1 programme aims to raise the

energy performance certificate (EPC) rating of social homes to a minimum of Band C. Energy efficiency measures included in the scheme include insulation, draught proofing, and upgrading heating systems, solar panels, heat pumps, and many others. The funding will help to reduce the number of people in fuel poverty and improve their comfort and health, while driving down CO2 emissions and supporting the green economy and jobs.

The hub is currently in the process of assembling a consortium and developing a bid for SHDF wave 3, which we expect to be larger than our SHDF2.1 programme, supporting even more homes and families in the region.

Hub Local Capacity Support has also supported consortium bids in other parts of the region.

### Case Study

Mr Easton from Teesdale has had wall and loft insulation and solar panels installed at the home he rents from North Star Homes as part of the Hub-led Social Housing Decarbonisation Fund (SHDF) consortium.



He said:

*“Apparently my insulation was the worst of the six houses on my row. I knew it was a problem, I often found it cold in the winter – the bathroom and kitchen very cold – but it would have been way beyond what I could afford to address it and I would never have contemplated it. My house is now generally warm and at 80 that’s a great comfort.*

*“Basically, my electricity bill has disappeared – my direct debit keeps going down! – and I am even generating surplus power on a sunny day which goes to the grid. The idea that my little home is powering itself and the National Grid is very satisfying.*

*“It was all done very professionally and neatly, and it only took a couple of days. The trades people were very courteous and professional – I can’t find any fault.”*

## Our consortium partners

- Assist
- Barnsley Council
- Believe
- Bernacia
- Beyond Housing
- Darlington Council
- Doncaster Council
- Great Places
- Hartlepool Council
- Humankind
- Karbon Homes
- Livin
- Northstar
- Sheffield City Council
- South Tyneside Homes
- Tees Valley Combined Authority

## Retrofit Skills Pilots

We were asked by the Department for Energy Security and Net Zero (DESNZ) to develop a Retrofit Skills Plan for the region, setting out how we can build the workforce the region needs to make our homes cheaper and easier to warm and power.

The plan found Higher and Further Education providers in the region face a range of challenges in delivering retrofit training, including a lack of staff time to develop course content, lack of awareness of the training offer amongst businesses and poor

understanding of what retrofit is. With further funding we are now working with five different projects to pilot interventions aimed at addressing these challenges.



Department for  
Energy Security  
& Net Zero



## Local Energy Advice Demonstrators (LEAD)

We are also taking part in a national pilot programme of six projects which are looking at new ways of delivering energy efficiency advice to the 'able to pay' market in hard-to-reach communities and people who live in hard-to-treat homes – such as properties with solid walls and in conservation areas.

Our LEAD projects include:

- **Groundworks Yorkshire:** Targeting older and lower-income private rented sector tenants, who

often struggle to access government funding; and older, asset-rich but cash-poor owner-occupiers.

- **Yes Energy Solutions, West Yorkshire:** Providing assessments of what measures could improve the energy efficiency of homes for people who are digitally excluded, on low incomes and from marginalised communities, and identifying what barriers are preventing their installation.

- **Retrofit One Stop Shop:** In-person energy advice across Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside and Sunderland alongside retrofit awareness training to local community leaders, charities and service providers to support engagement with harder-to-reach residents.



£4M

Cumulative Spend  
(March 2025)

4,974

People given in-person  
advice (March 2025)

1,509

Households with retrofit  
measures installed  
(March 2025)

## Public Estate Decarbonisation

Our retrofit activities don't end with domestic properties – we're also supporting local authorities to decarbonise their own buildings and community spaces.

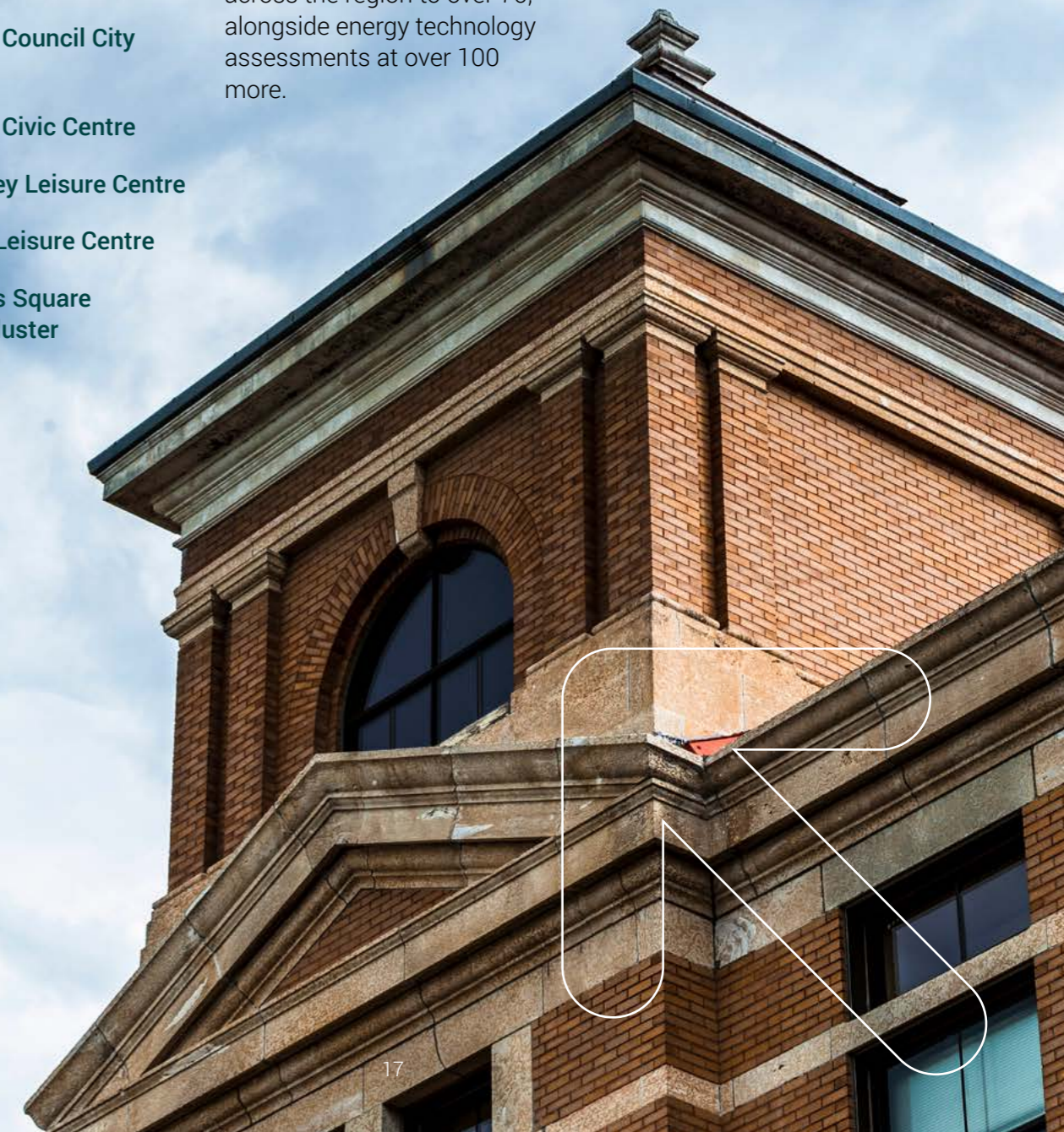
Under our NEY Public Estate Decarbonisation programme, heat decarbonisation plans have this year been completed for 11 buildings, including:

- **Tees Valley Airport –** Main Terminal & TVCA Offices
- **Doncaster Council City Archives**
- **Doncaster Civic Centre**
- **Colne Valley Leisure Centre**
- **Holmfirth Leisure Centre**
- **Woodlands Square Building Cluster**

- **Red Kit View Primary Care Building**
- **York Eco Depot**
- **Burnholme Community Centre**
- **Brighouse Pool**
- **Sowerby Bridge Leisure Centre**

This takes the total number of heat decarbonisation plans we have facilitated across the region to over 70, alongside energy technology assessments at over 100 more.

We have delivered training sessions to upskill staff – with six regional and online bootcamps teaching innovative strategies and practical solutions to reduce carbon emissions in public buildings to over 70 local authority staff members. We have also developed online resources to help public organisations decarbonise their own estates.



# Supporting communities to generate clean energy and heat where it is needed



**70** community projects supported



**£912.12K** invested in communities



**80** local people trained in carbon literacy

Community energy projects see local people come together to use local resources to generate and save energy where they live.

Community-owned renewable energy projects are helping decarbonise the UK's energy system by generating clean, low carbon electricity closer to where it's needed, and which can also feed into the national grid – and reduce the risk of power cuts.

As these projects are owned by the community, their benefits are felt locally – not just reducing energy costs for organisations and households and building resilience into communities, but even potentially generating income which can be spent on other community projects.

Over the past year, we've supported over 100 community energy groups from every corner of the North East and Yorkshire.



## Community Energy Fund

We have managed the national Community Energy Fund in the North East and Yorkshire, providing grants of up to £140,000 to help local groups take the first steps in developing community energy projects.

The fund has so far empowered town and parish councils, sports clubs, charities, faith groups,

co-operatives and Community Interest Companies to kickstart clean energy projects by funding feasibility and development of projects including small-scale wind farms and rooftop solar partnerships, battery storage, rural heat networks and electric vehicle charging points. The fund can also be used to develop fuel, retrofit and advice projects.



**£295,076**

Round 1 – Grant Value

**23**

Total Projects Supported

**£617,085**

Round 2 – Eligible Grant Ask

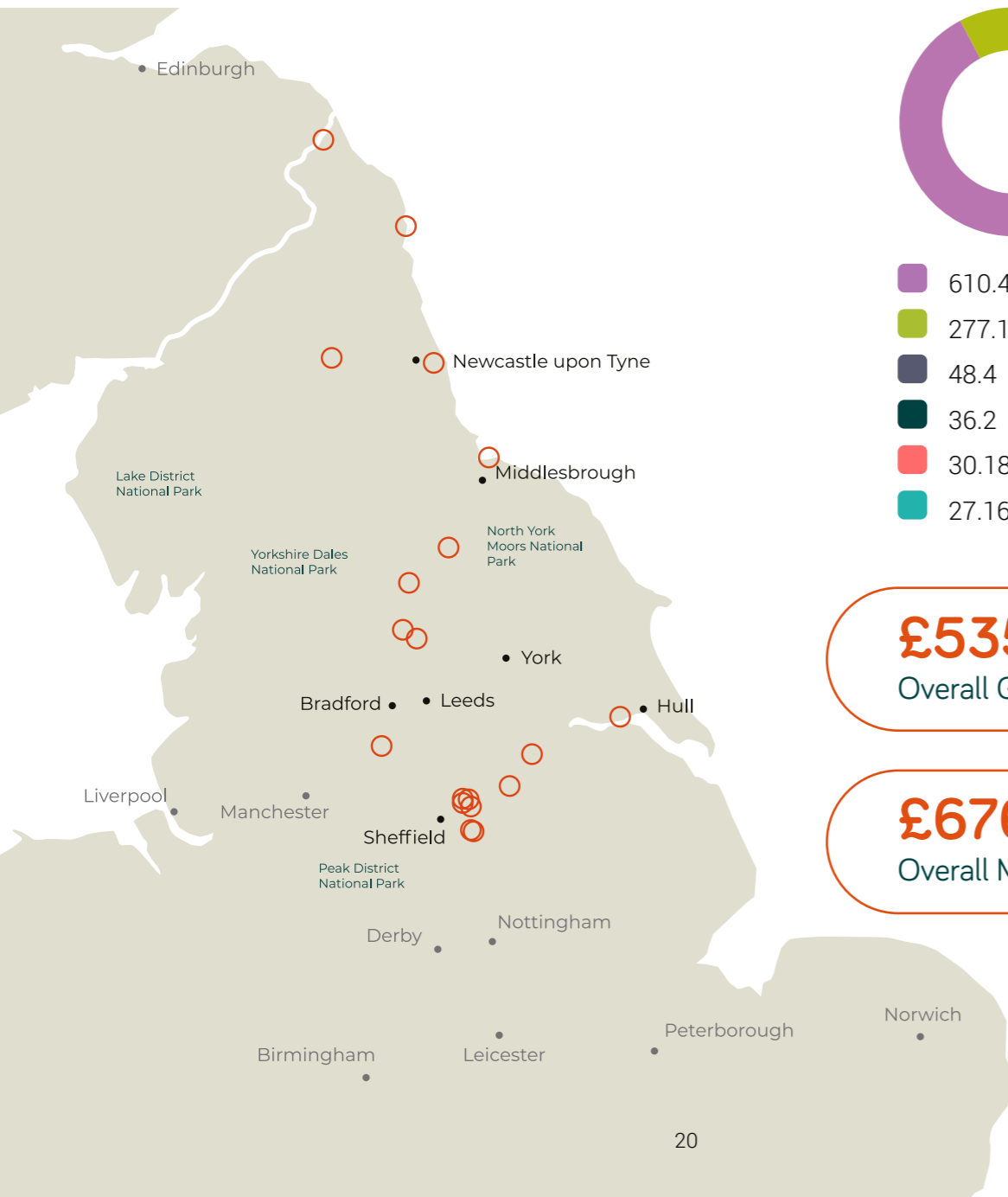
## Energy Project Enabling Fund

The past twelve months have also seen continued delivery of Round 2 of our Energy Project Enabling Fund, which is designed to help emerging projects to move from design to delivery – and even deployment.

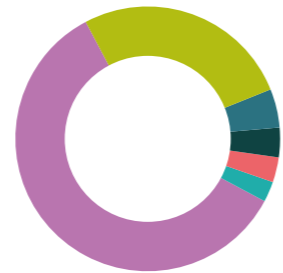
We've provided 28 grants of up to £100,000 to enable organisations to deliver local energy projects and up to £50,000 to complete development works preparing their projects for delivery.



## EPEF2 Programme



## Carbon Savings per Year (tonnes) by Region



610.4	NECA
277.165	YNYCA
48.4	SYMCA
36.2	WYCA
30.183	TVCA
27.165	HEY BGS Hub

**£535.42K**  
Overall Grant Awarded

**£676.92K**  
Overall Match Value

## Case Study



The Community Energy Fund is helping the rural community of Norham in Northumberland to develop its own 0.9MW wind turbine and 8.9MW solar array – expected to produce revenue for the community for 30 to 40 years while making the village self-sufficient in terms of energy generation.

Annually, it is expected that the project will save 532 tonnes of CO<sub>2</sub> – and 10,650 tonnes over 20 years.

Jim Greenwood from Norham Development Trust told us:

*“Northumberland County Council declared a climate emergency and we wanted to play our part by making our community carbon neutral by 2030 – we saw a great opportunity in generating power for our community”.*

William Jackson from the Trust added:

*“We thought it was an opportunity to both decarbonise our community and to provide an income stream for local infrastructure. Energy use is also changing in our area – with more and more electricity demand through things like Heat Pumps and electric vehicles. We have to future proof our community.”*

*“We have no assets and means of generating income and without Net Zero Hub schemes – we wouldn't have been able to get it off the ground and the project to this stage.”*

## Case Study



Sheep farming in the Yorkshire Dales dates back to the Vikings and Masham is renowned for its annual Sheep Fair and the breed of sheep named after the town. Our Energy Project Enabling Fund is now helping a Community Space in the town to use sheep's wool to revolutionise the building industry.

The Peacock and Verity building has been a grocers in the town for at least 300 years and is currently being restored as a living history tourist attraction, community space and functioning Post Office using the most sustainable materials possible – including using wool which may otherwise have gone to waste, as insulation. The project also aims to get wool insulation used across the country, with the building acting as a test site where contractors and builders can learn how to install sheep's wool insulation. The project has been supported with £39,000 from the Energy Project Enabling Fund and is expected to save 250 tonnes of carbon emissions from the test site alone.

Jan Reed, from the project said:

*“Sheep’s wool is the perfect insulator for traditional stone buildings – not only is it a warm blanket, but the wool’s structure helps to wick moisture away and is a natural fire retardant. And most importantly, it’s environmentally friendly. It lasts for decades and can be composted at the end of its life, unlike man-made insulation which is often full of plastic. If it’s good enough for sheep on a windy moor, it’s good enough for us to use in our buildings!”*



## Support for local groups



### Steering Group

This year has seen us establish a regional Community Energy Steering Group, bringing together local groups and wider stakeholders with expertise and interest in community energy to drive the development of a self-supporting sector in our region. The group has developed an Action Plan to support this which also informs the support we offer whilst building connections and knowledge sharing between regional groups and local authorities. The group has also produced an online library of resources for community groups.

### Subsidised Energy Audits

The Steering Group identified energy audits – specialist reviews of community group's energy use alongside recommendations for improvements to reduce their energy consumption – as one of the stages of development work, they needed help with. The first stages of projects are often the hardest to fund, so these audits are often the first step towards groups developing their own clean heat and energy saving or generating projects. This year we've piloted subsidised Energy Audits at **16 regional community buildings** meaning that the organisations have had to only pay a fraction of the cost – with more on the way.

### Carbon Literacy Training

We've also offered professional carbon literacy training to over 80 representatives of local community energy groups and Local Authorities, helping them and the organisations they represent to develop their awareness of the carbon costs and impacts of everyday activities, and their ability to reduce emissions, individually, organisationally and as communities.

## Case Study



One of the organisations to benefit from a Hub-subsidised Energy Audit is Growing with Grace, a North Yorkshire Community Benefit Society which sustainably grows and sells fruit and vegetables – with all crops grown in compost made on site from local green waste – and invests profits back into the community.

The group told us

*“We have the ambition to develop our nursery into a demonstration circular economy site for local people, businesses and visitors. We wish to generate renewable energy to reduce our carbon footprint, operational costs and to inspire others to take action. The audit will help us identify how to improve energy efficiency and decarbonise our social business. We will be able to take informed decisions about what type of renewable energy methodologies and equipment we invest in.”*



## Sharing knowledge and advocating for the region

The Hub also has an important role to play in supporting the exchange of research, knowledge and best practice – helping to inspire and inform future projects and to raise local awareness of the opportunities for and benefits of local Net Zero investment.

We are also a direct line to the heart of government, articulating the needs of our partners and our region to decision-makers and advocating on behalf of the region for interventions supporting an energy transition which meets the needs of the North East and Yorkshire.

All Parliamentary Group on Deep Geothermal Reception



## Growing the knowledge the region needs to progress Net Zero ambitions

We maintain a Strategic Project Pipeline of proposals for strategic development activity which can be considered and brought forward for Hub delivery, resource allocation or government funding when available. This year we've drawn on the pipeline to meet some of the identified knowledge and research the region needs to develop its Net Zero ambitions. Hub-driven research undertaken this year includes:

### **Spatial and Temporal Modelling in Net Zero planning:**

A study into how local authorities can get the most out of their energy planning – including securing investment. The report sets out the data and skills which could give local areas a more informed picture of where they are on their Net Zero journey – and what tools may assist them.

### **Hydrogen Roadmap:**

Development of a model of planned hydrogen assets and demand sites exploring different scenarios for the development of hydrogen production, distribution, storage and demand in the North East and Yorkshire. The independent analysis concluded the region “has more potential than most regions for the deployment of hydrogen” which is predicted to replace approximately 20% of current fossil fuel demand.

### **Internal Carbon Pricing and Insetting:**

This research puts a financial value on the carbon emissions of local authority investments and service delivery in terms of the potential impacts of climate change on their communities – making it easier to make a case for Net Zero investments. The report outlines two potential approaches, Carbon Pricing, which includes this cost in the capital expenditure approval process, and Carbon Insetting, where funding

for these projects could be secured through procurement or property development income.

### **Unlocking Deep Geothermal at Scale:**

This paper sets out how energy generated and stored in rocks, groundwater and soils can provide a low-carbon source for heating, cooling and power generation and how investment in geothermal energy could deliver an economic boost to the North East and Yorkshire, as well as providing a valuable transition opportunity for the fossil fuel extraction sector.

### **Energy Assets Map:**

We have fully updated our Energy Assets Map, our **interactive online resource** which allows local areas to map operational and planned energy installations against infrastructure, like transmission and transport networks.

All Hub-backed research is available on our website.

## Sharing Knowledge

In the past year we've arranged and hosted a wide range of knowledge sharing events, including webinars on Heat Network Zones and Public Sector Decarbonisation and a whole day Local Area Energy Planning masterclass. Our Local Capacity Support

has also developed a toolkit to assist schools in embedding sustainability into their operations, potentially reducing costs and creating valuable curriculum opportunities.

We've also presented and participated in a wide range of third-party events and even hosted a delegation of Japanese civil servants investigating the possibility of replicating the UK's Local Net Zero Hub model on the other side of the world!

# The Year Ahead

## Priority projects for the year ahead include:

- Building on our Retrofit Skills Plan to oversee Delivery Innovation Pilots at some of the region's further education colleges and training providers, exploring new approaches to building the region's retrofit workforce.
- Leading a consortium of local authorities and housing providers to bid for funding for home improvements from the next wave of the Social Housing Decarbonisation Fund.
- Scaling up our support for heat networks – which carry heat from a central source, including waste heat from industry or nature, to homes and buildings.
- Expanding our support for the decarbonisation of public buildings and spaces.
- Development of Decarbonisation Pathways in Hull and East Yorkshire, Tees Valley, South Yorkshire and West Yorkshire.





north east & yorkshire  
**NET ZERO HUB**

## Contact us

Find out more at [www.neynetzerohub.com](http://www.neynetzerohub.com) or contact us at [enquiries@NEYnetzerohub.com](mailto:enquiries@NEYnetzerohub.com). You can also use the website to sign up to our regular newsletters and policy updates. You can also find us on [LinkedIn](#) and [YouTube](#)

Our physical HQ is at the Tees Valley Combined Authority – our accountable body – at the TIA Business Suite, St George Way, Darlington, DL2 1LU.

You can also contact individual team members or find out more about their roles by scanning the below QR code.

