

APSE BIG ENERGY CONFERENCE 2024

Briefing note



Rounding up APSE Big Energy 2024

The national Local Net Zero Hubs network recently partnered with the Association of Public Service Excellence at their annual Big Energy Conference.

The event is designed to share knowledge and insight from innovative net zero projects across local government, setting out the technologies, business models and approaches that local authorities have adopted to deliver their local energy strategies – which is also one of the key missions of Local Net Zero Hubs.

The national Local Net Zero Hubs also ran a very well-received stand raising awareness of our work to support local areas in the delivery of their Net Zero ambitions. This is the first time the five local Hubs have teamed up like this and we all made very useful connections through it.

If you could not attend the event, the North East and Yorkshire Hub has rounded up some of the place-based Net Zero case studies that were highlighted at the event.

If you would like the Hubs to connect you to any of these projects, drop us a line at enquiries@NEYnetzerohub.com

Day One

Katherine Wright, Deputy Director of Local Net Zero from the Department of Energy Security and Net Zero began proceedings by highlighting the progress made towards Net Zero at a national level – and the role of local areas in delivering national ambitions.



The UK is the first major economy to halve its emissions and 50% of our energy now comes from renewable sources (compared to 7% in 2010). **Katherine noted the “fantastic work” of the Net Zero Hubs in delivering Net Zero locally in particular mentioning the Wickersley Trust Partnership Solar School Project in the North East and Yorkshire.**

This is a solar panel installation project at 6 schools in Rotherham and South Yorkshire which has secured £430k of match funding leveraged by £100k grant from our Energy Project Enabling Fund. The solar panels are estimated to generate around 270 MWh of electricity annually – reducing the school’s CO2 emissions by approximately 54 tonnes per year – and over 1000 tonnes of carbon are expected to be saved over the lifetime of the project. The project also offers educational opportunities as the trust has integrated renewable energy technologies into its curriculum.

Katherine also highlighted the importance of developing robust evidence base for local delivery, especially in terms in evidencing delivery – this is something the North East and Yorkshire Hub is keen to address through our work supporting with local area energy planning and our current research making this kind of planning more adaptive and dynamic (about which more soon!)

Katherine then highlighted new initiatives in local **Net Zero such as the Local Net Zero Accelerator Pilots – which includes the York and North Yorkshire Combined Authority’s project working to attract private investment into local Net Zero projects**, noting how local areas taking an investment portfolio-based approach can be more successful than seeking funding for individual projects,

attracting patient capital such as pension funds while encouraging financing for projects which may struggle to attract private funding alone.

Ed Whincup from the Behavioural Insight Team, a spin out from the Cabinet Office now acquired by NESTA, the innovation charity, then spoke on their work on **how humans make choices in the real world and how this knowledge can be applied to achieve change**, using the Teams **EAST Framework** of making change EASY ATTRACTIVE SOCIAL and TIMELY.

- EASY examples include the auto-enrolment of energy customers onto renewable energy tariffs. Where has previously only 7% of customers had opted in, 70% chose not to opt out. An example of Croydon council writing to residents to highlight the public spending which would be possible if the authority's landfill costs were reduced, which led to a 6.2% rise in recycling rates.
- ATTRACTIVE examples include the national introduction of the 5p plastic bag levy, which incentivised shoppers bringing their own bags, changing their default behaviour of shoppers and reduced the number of plastic bags used per year by each person from 140 to 3.
- SOCIAL relates to the impact of friends and networks for encouraging change – in particular the “contagious” nature of solar panel installation where visibility in neighbouring properties accelerates local adoption.
- TIMELY is interventions being targeted when people are the most receptive to change – for example with people being four times more likely to change their travel mode to active travel when they have recently moved house.

Justin Olosunde from the South West Net Zero Hub then chaired a **panel on green finance**, during which Danny Mather, Head of Corporate Finance at Warrington Borough Council highlighted simple steps that local authorities can take in this space, such as:

- Switching bank accounts to a climate friendly provider.
- Funding community finance and harnessing additional engagement benefits
- Aggregating net zero projects in need of private financing into a single investment portfolio, which has been seen to encourage insurance investments (with the chair highlighting the role Local Net Zero Hubs can play in the development of this pipeline)
- Placing climate change operations within the authority finance directorate to make Net Zero at the heart of council operations.
- Public and private sectors working together to deliver new finance models

Alan Barber and Mike Keating from APSE led a workshop on **applying for public sector decarbonisation funds** – about which **the Hub has developed a series of resources** – which made the following recommendations.

- Authorities should create a prioritised asset list focused on which assets are the least energy efficient which incorporates what available space there is for retrofit adaptations (is there space for a heat pump, for example) and pick projects that can be delivered quickly.
- Make sure you have senior level buy-in to ensure projects are delivered.
- Know existing and proposed energy usage of buildings and seek for assets such as boilers to be replaced at the end of their usable life – and be prepared to evidence this.
- Engage with the DNO to ensure that there is necessary capacity for any electricity-based retrofit solutions, particularly if grid reinforcement work is likely.
- Assess what the relationship is between the boiler and building water supply – it may be possible that the current boiler does not need a like-for-like

replacement is much of the buildings water use is cold – the current boiler might have too much capacity for your building need.

- Remember that your budget is not just for a heat pump, but groundwork, enclosures, removal costs and cost of supply upgrades.

Tim Crawshaw from APSE also led a workshop on how adaptation and mitigation can be supported by better planning – highlighting how **one tree provides the same benefits as 5 air conditioning units**. Tim outlined the importance of building flexibility into development with multi-functional spaces and building optimisation and highlighted great examples and case studies including **the Leeds Pipes heat network and Tees Valley Nature Partnership seagrass planting from the North East and Yorkshire**. In particular, Tim notes how the Leeds Pipes heat network benefitted from early engagement with the Local Planning Authority to grant permitted development, removing a barrier and putting it on the same footing as communications infrastructure. Tim also states that getting the right people in is key – the right people will find a way to make a climate friendly scheme viable

After lunch, Alex Ellis from Flintshire County Council presented on **the role of procurement in net zero**, noting that 70% of a local authority's carbon footprint comes from its supply chain. The authority's Climate Change Strategy includes procurement, with interventions including:

- Improving carbon footprint reporting from contractors to obtain a better understanding of the actual emissions of council procurement – this reporting is currently voluntary but the council plans to move to making it compulsory.
- Weighting towards lower carbon options in procurement frameworks.
- Sharing a low carbon procurement specialist with a neighbouring authority.
- Prioritising supplier engagement – supporting SMES with less experience or capacity in this area, identifying the authorities' top suppliers by spend and frequency and working directly with them to lower the carbon footprint of contracts and awareness raising through external groups and networks.
- Engaging with the authority's capital works programme to establish emissions targets.
- Integrating carbon reporting with council decision making tools, such as Impact Assessments, Business Case templates and ensuring that the council's climate team are consulted – and even have to approve – commissioning decisions.

Rhian Palmer and Anne Livesey then explained Coventry City Council's **partnering with the private sector to address climate change through the establishment of a joint venture** partnership noting that the council does not have “sufficient capital, resource or expertise to tackle climate change in isolation.”

The Council have formed a 15-year strategic energy partnership with E.ON to provide capacity, expertise, and investment to support local net zero transition and to use public sector infrastructure, assets, and local knowledge to develop projects. This collaborative approach is delivered by a public and private sector co-located team with a governance/gateway process to initiate /develop projects together. This approach has enabled long-term and sustainable infrastructure planning, with investment to support the transition to net zero, helped maximise resources and provided an opportunity to re-invest revenue generated to grow the City's decarbonisation programme.

This approach has effectively doubled the size of Coventry's Climate Change team and has led to 16+ projects in progress, ranging from a solar farm, public sector

building and fleet decarbonisation, solar for schools, electric vehicle charging infrastructure and domestic retrofit.

The North East and Yorkshire was excited to then see **Nick Davies presenting on the Viking Energy Network in South Tyneside**, increasingly seen as a [national example of best practice](#) in the development of local heat networks.

The project has built on almost two decades of local authority net zero innovation, beginning with installation of a (second hand – a great example of the circular economy!) wind turbine at a council depot in 2006, meeting 40% of the site's energy needs.

The network combines a solar PV farm, water source heat pump from River Tyne and solar thermal to heat a local business centre, Jarrow Town Hall, and several tower blocks, leading to a CO2 reduction of 726 tonnes a year and meeting 4% of the council's 2030 zero carbon target single-handedly. Not only have there been no outages since the network became operational – the PV system is exporting to the grid on bright days, including in December.

Leman Barmaki, Sustainability Director at Kensa Consulting led an 'expert' session explaining the **technological developments and opportunities of ground source heat pumps** as an alternative technology. This session set out how new ground source heat pumps are being designed that are the size of a shoebox to fit comfortably in most homes and have a longer lifecycle (20+years) than many airsource heat pumps (7-15years). They also now achieve the cheapest lifecycle cost.

Mark Holmes from Cornwall Council completed day one with a presentation on **nature recovery**, stating "nature isn't just nice to have, it's foundational to how we live." The authority is seeking to catalyse private funding in natural capital working with the supply side (land owners and users) to understand the opportunities of nature-based solutions (including carbon drawdown and natural flood management) and to strengthen investor readiness and "match-making" with funders, buyers and investors, with whom there has been demand side engagement to understand their interests and demands and anticipate market and policy trends, to showcase investment opportunities, establish investment vehicles and to establish local markets.

Day Two

The second day commenced with a series of short presentations, including:

- Alex Beckett, Buckinghamshire Council – Energy Doctor Scheme (**Domestic Resource Efficiency Service**). This SPF-funded project aims to visit 1200 local properties to identify if households are paying too much for energy and to provide energy efficiency advice as well as implementing "easy" retrofit measures – aiming to save 300 tonnes of carbon a year. The projected underspend from the programme is now being directed towards a grant scheme aimed at owner-occupiers and private sector renters who are not eligible for current national funding programmes. The project has highlighted the exponential impact of smaller scale and lower cost measures such as reflective radiator panels, letterbox draft excluders and chimney balloons. The North East and Yorkshire Net Zero Hub is currently managing several [Local Area Energy Demonstrator](#) pilots looking at providing in-person energy efficiency advice to hard-to-reach communities and for hard-to-treat properties.
- Cllr Sarah Warren from Bath and North East Somerset Council – **Introducing a Clean Air Zone**. Cllr Warren set out the challenge of securing public and

business support for measures aimed at meeting the council's statutory clean air responsibilities relating to NO₂, something residents can't see or taste, across an area which many people affected by the changes live outside of the affected area through extensive engagement through a "cup of tea" approach focused on direct in-person conversations with stakeholders, hand in hand with grants and funding to upgrade non-compliant vehicles. The zone has led to a 26% decrease in NO₂ within the CAZ boundary.

- Steve Leary, Nottinghamshire County Council – **Solar Bin Lorries**. The authority analysed waste collection vehicles and found them to be responsible for 40% of the council's direct emissions – but recognised that full-scale vehicle replacement was "financially inappropriate" while also contributing to additional emissions through manufacturing and placing a strain on limited EV charging capacity. The council instead trialled installation of solar mats to 6 vehicles to reduce their energy usage, a low-cost option which has so far saved 6 tonnes of carbon a year, while paying for itself in terms of cost savings within 4 years.
- Andy Hills from Derby City Council – **Carbon Negative Homes**, properties managed by the local social housing ALMO which produce more energy than they consume – integrating PV installation into an existing re-roofing programme and with an emphasis on improving the visual appeal of properties and creating a property which "feels like any other house" to "normalise" retrofit. The council is also working on a Local Area Energy Pathway to provide more granular data to inform future retrofit interventions.

The conference then broke for a series of workshops, including:

- **Central Bedfordshire – overcoming grid capacity issues to support large housing developments.**
- **South West Net Zero Hub – funding domestic retrofit with the development of a loan fund for the able to pay**, financed through public and private capital, designed to save £70m from household bills and 450,000 tonnes of carbon over a decade.
- **New Forest – embedding climate change in decision making**

Darlington Borough Council also hosted a workshop on **designing for climate change through the planning system**. This has involved the creation of a design code for the 4500 home Skertingham Garden Village supplementary to the Local Plan.



The code seeks to prioritise active travel throughout the area, alongside landscape strategies that promote carbon sequestration, management and maintenance operations that minimise energy use, homes are oriented to maximise PV efficiency and to use "daylighting" to minimise the need for lighting and embodies carbon to be considered when considering material choice. A percentage of dwellings in the development will also achieve Passivhaus (carbon negative) standards.

A final panel session saw **Midlands Net Zero Hub manager Michael Gallagher highlight the benefits of local area energy planning**, and including a socio-economic benefits analysis in the plans, which can demonstrate their value to decision-makers. The D2N2 Local Area Energy Plan, for example, was able to show how the interventions identified to meet Derbyshire and Nottingham's projected energy needs would have a projected economic impact of £11bn and the creation of 4000 jobs. The North East and Yorkshire Net Zero Hub region is home to several

well-regarded [Local Area Energy Plans](#) which have been supported through our [local capacity support](#).