Project Title	Project Lead // Project Partners	Project Description
LAEP to Net Zero	Greater Manchester Combined Authority // GRAHAM OAKES LIMITED; ELECTRICITY NORTH WEST LIMITED; BRUNTWOOD ESTATES LIMITED; TRANSPORT FOR GREATER MANCHESTER LIMITED; REGEN SW; THE SOCIETY FOR THE REDUCTION OF CARBON LIMITED;	**GM's LAEP to Net Zero** project seeks to accelerate the deployment of regional local area energy plans (LAEPs) across the Greater Manchester Region. The LAEPs indicate a need to deliver cr£1.9bn of new investment above and beyond business-as-usual activities over the next 5yrs. This project will develop an integrated and replicable plan on how to deploy low carbon technologies at scale breaking down barriers and siloes across finance, customer engagement, supply chain, and the policy and regulatory environment. This project will consolidate the findings from initiatives and programs previously undertaken within GM and across the UK. We expect this integrated view to develop innovations in the following areas: ***Financial Innovation:** Commercial and contractual models for local power purchase agreements and CfDs that can be accessed by developers and owners of Low Carbon Technologies (LCTs); new financial models to support investment in LCTs ***Service Innovation:** new consumer propositions, services and tariffs that exploit these commercial structures and enable consumers to buy and operate LCTs ***Market Innovation:** technical, commercial and governance designs for a market platform to support interoperation and data capture across a range of LCTs, thus enabling OEMs, suppliers and other energy system innovators to bring new products to market ***Partnership models:** development of models that give assurance of long-term demand for LCTs that enable OEMs and installers of LCTs to develop skills and supply chains for their equipment This project is about identifying and targeting the remaining missing links between those existing projects and teams to generate a single, accessible whole systems, place-based framework for action that can be replicated across the UK.
Orkney pioneer project	AQUATERA LIMITED // THE EUROPEAN MARINE ENERGY CENTRE LIMITED; COMMUNITY ENERGY SCOTLAND LIMITED; Orkney Islands Council	Since the UK's first grid-connected wind turbine started generating electricity in 1951, Orkney has been a world leading testbed for renewable energy and decarbonisation - pioneering innovative approaches and technologies; and growing a collaborative, expert community of keen early adopters and volunteers for pilots and projects.Featuring leadership and involvement of long established and effective local partnerships between Aquatera, Orkney Islands Council, the European Marine Energy Centre, Community Energy Scotland and ReFLEX Orkney Ltd the NZPP Orkney project will build on this tradition of innovation success and pioneering development activity.These partners have significant real-world experience of non-technical barriers to achieving innovation in energy solutions, which include regulation, policy, finance, behavioural change and challenges with restrictions around the grid network. Following previous work such as the Orkney ReFLEX project, these issues are well understood but have proven wicked problems to address to date. The NZPP project will specifically engage with these known difficulties -- unlocking new and innovative solutions which can secure further progress for Orkney in decarbonisation.The Project will also take place in sequence directly after core funding completes for ReFLEX Orkney, and the launch of the new Islands Deal _Islands Centre for Net Zero project_. The ICNZ also involves the Orkney NZPP partners, and Heriot Watt University - in a 10 year programme to create a pan-island innovation Centre that will support Orkney, Shetland and the Outer Hebrides. The NZPP project will therefore enable a jump start for key thematic objectives which can underpin the future work of the ICNZ - ensuring accelerated solutions to decarbonisation for Orkney and the Scottish Islands which will in turn have replicability and application worldwide.Transition and transferability of understanding of challenges and solutions development are critical hallmarks of the NZPP project process. This will form a foundation of the Orkney project from the outset -- with direct collaboration already in place to link in with a parallel bid led by Shetland Islands Council to pursue a NZPP agenda for Shetland linked to energy hubs. There will be mutual benefit in the cumulative activity between Orkney and Shetland associated with these pilot projects -- reflecting the strong traditions of both Orkney and Shetland as innovative island communities; and presenting an effective pathway to the future work of the ICNZ which will further enable this partnership to include experience and challenges of communities across the Western Isles and beyond.
Breaking Barriers to Bethesda and Blaenau Being net zero	Gwynedd Council // ENERGY LOCAL CIC; PARTNERIAETH OGWEN; COMMUNITY ENERGY WALES - YNNI CYMUNEDOL CYMRU; CWMNI CYMUNEDOL BRO FFESTINIOG	The 3-month project will be led by Gwynedd Council, together with Energy Local, who develop local energy markets and Community Energy Wales, which promotes community energy across Wales. The project will work closely with two community partners, Partneriaeth Ogwen and Cwmni Bro Ffestiniog, to: * Develop innovative business models to derisk the development of new local energy markets and community heating markets linked to renewables in the communities of Blaenau Ffestiniog and Bethesda in North Wales. This work will attract public & private financing finance and benefit local businesses and households who can purchase low-cost clean power and heat. * Development of a business plan to extend and develop a network for Bikes, e-bikes, community electric vehicles and charging points for cars and buses. This network will improve access to work and education spaces and increase income to renewables providers via charging both local and tourist vehicles. * Liaise with the Welsh Government and Transport for Wales (TfW) to charnge e-buses from local renewables and to support the innovative business models for community renewables and heat. * Develop a business plan to develop digital services using a smart data platform powered by the Internet of Things (IoT) with the potential for a Welsh-wide company to collect smart meter data.. * Community engagement and sensitisation on the potential for new renewables, particularly wind and map development of potential new sites for renewable infrastructure. * Develop a plan to increase the capacity of local educational establishments to develop local renewable projects. The project will provide innovative business models to finance new renewables infrastructure using novel local energy markets as a long-term revenue generator to overcome financing barriers. It will develop a plan

		to coordinate heat, transport and power to maximise the benefits and support the local economy whilst decarbonising, meeting net-zero targets and developing local skills and capacity to accelerate projects. The potential and benefits will also be clearly communicated to communities to sustain buy-in. The final project report will include future plans, next steps, costings, roles and responsibilities.
Decarbonising Portsmouth City Island	Portsmouth City Council // University of Portsmouth; CITY SCIENCE CORPORATION LIMITED	Portsmouth is a waterside city with a commercial international port and naval base with ambitious plans to become net zero by 2030\. Our project takes a whole-system view of Portsmouth as a "City Island", addressing challenges including: * Enhancing Coordination between key actors, sectors, communities and the DNO, * Strengthening Influence through policy and regulation while innovating in finance and behaviour change, * Working Collaboratively with the Port, Navy and shipping sector and wider anchor institutions including the NHS, University, Tourism sector and wider regional authorities to support decarbonisation. By establishing a new dynamic collaboration approach to accelerate delivery of critical infrastructure, our project delivers the innovation necessary to accelerate our route to Net Zero.
Runnymede's Runway to Net Zero	Runnymede Borough Council // CITY SCIENCE CORPORATION LIMITED; London Borough of Hounslow	**How do you decarbonise a community in the presence of a nationally significant hard-to-decarbonise asset/industry?** **PLACE:** Runnymede is a small Borough in Surrey, measuring only 30 square miles with approximately 79% of its area within the Metropolitan Green Belt. Despite this idyllic sounding location, Runnymede is hampered by multiple proximate carbon producers outside its control: *Both the M25 and M3 bring significant traffic through the borough. *Runnymede is five miles from the UK's largest and busiest airport-- Heathrow. Accessibility to Heathrow makes Runnymede a highly desirable business location. However, this also creates significant economic dependence on a hard-to-decarbonise industry and nationally significant asset. As a core member of the Heathrow Strategy Planning Group (HSPG), Runnymede is part of an "Airport Community" that covers 11 Local Authorities all facing a similar dependence. **DECARBONISATION NEEDS:** Runnymede Borough Council (RBC) has a 2030 Net Zero target and has recently refreshed its climate change strategy. However, powerful outside influences ensure considerable challenges remain in decarbonising the borough. This project addresses RBC's critical needs and other HSPG authorities to: ***Work at a "Whole System" geography.** Runnymede is a "part player" in a much larger system, best viewed at the "Airport Community" level. Local strategies (e.g. Local Area Energy Plans - LAEPs) are currently in geographical silos insufficiently joined-up. ***Increase Influence over Externally Produced Carbon.** e.g., addressing the challenge of decarbonising through-traffic, alongside reducing the need to travel within a borough with significant out-commuting. ***Economics/Offset-Markets.** While there is significant investment by Heathrow and local businesses in Net Zero, economic benefits (e.g. international offsets) are largely flowing out of the region. **OUR PROJECT:** Our project takes a "whole system" view of Runnymede, conceptualising the Borough as part of a wider HSPG Airport Community to tackle how to influence currently uncontrolled actors through: ***Coordination/Governance:** Improving coordination, scenario-planning, prioritisation and investment within the Airport Community context. ***Behaviour Change and Influence:** Developing mechanisms to improve influence and coordination with external regions where carbon emissions originate. ***Delivering Local Benefits:** Working with Heathrow and large international businesses to enable decarbonisation funding (insets/offsets) to be recycled locally to maximise change. **INNOVATION:** Our project innovates by considering levers of influence within the concept of "functional carbon areas" and developing new co-operative approaches and synergies to unlock key barriers and maximise mutual benefits within the Heathrow Community. Our innovations cover joint governance, interoperability (e.g. of LAEPs), facilitating behaviour change, developing policy, and promoting offset-finance.
Cambridgeshire Net Zero Financing Framework for Whole System Change (CANFFUND)	Cambridgeshire County Council // UK POWER NETWORKS (OPERATIONS) LIMITED; CITY SCIENCE CORPORATION LIMITED;	The Cambridgeshire and Peterborough Independent Commission for Climate (CPICC) estimated that £700m p.a. of funding will be required through the 2020s to decarbonise the area, and identified the need for an ambitious funding plan. This project seeks to build on this work, developing a series of practical and implementable place-based finance and funding packages to accelerate the delivery of net zero. Funding and financing Cambridgeshire's Net Zero ambitions is a significant challenge. We must look beyond the

	Cambridge City Council; Cambridgeshire and Peterborough Combined Authority; Greater South East Net Zero Hub C/O Cambridgeshire and Peterborough Combined Authority; East Cambridgeshire District Council; THE COLLABORATE I C.I.C.; South Cambridgeshire District Council; Huntingdonshire District Council	public purse and engage with private sector investment. The CANFFUND Project will look at the financial flows of money to identify where/how money is currently spent/invested through the economy and use **systems thinking** approaches to co-design mechanisms to redirect finance/funding/purchasing toward low carbon, local solutions. The initial focus is on power, heat, mobility and product manufacturing. Only by working in collaboration with partners and communities, across all sectors, utilising findings from existing and ongoing research programmes, can we identify and be part of the levers and opportunities for new financing innovations, and create the place based, local net zero financing framework we need. The project will bring together stakeholders from across community, business, public sector and investors to share understanding of the challenge and collaborate on solutions. This will build capacity, capability and skills and bring new opportunities to explore, such as the commercial and financial investments required for rural, farming and Agri-tech communities. All of this will extend and enhance work of the Connected Places Catapult, 3Ci project and other research programmes and disseminate learning. Our project will build on research by 3CI and others and seek to apply concepts of bundling projects together across power, heat and mobility into different proxy places. These proxy places will reflect the rural nature of Cambridgeshire's oil-dependent villages; market towns and low density urban communities, to identify the differences and benefits in 'places' for financing and funding Net Zero. The project uses an innovative "finance-first" approach to investigate the financial opportunities across the whole system and co-develop tangible solutions with all stakeholders and communities.
Beyond the “Living Lab” – an Organisational and Behavioural Approach to Scaling Net Zero	Beyond the “Living Lab” – an Organisational and Behavioural Approach to Scaling Net Zero	The City of Exeter is an economic powerhouse in South West England, with the second fastest growing populations in the UK. With the Met Office and University of Exeter located in the city, the city has a world-class reputation in climate science and a widely-supported 2030 Net Zero target. The City Council, Devon County Council, the University, NHS and Exeter College have been brought together, through Exeter City Futures, to address this joint goal. Our project addresses the issue of scaling solutions to Net Zero, by focusing on barriers such as procurement, risk and governance that are essential for enabling accelerated progress. Our project achieves this by applying novel co-design methods to develop a shared Playbook that will enable a robust and effective approach to delivering at scale.
Net Zero Delivery Plan for Liverpool: Breaking Down Systemic Barriers	NEW RESOURCE PARTNERS LIMITED // DECENTRALISED ENERGY SOLUTIONS LTD; ONWARD HOMES LIMITED; Liverpool City Council	Liverpool City Council (LCC) has published an ambitious, far-reaching and innovative Action Plan to deliver Net Zero Carbon energy use across domestic, commercial and industrial sectors and waste, but significant barriers must be dismantled for this to happen. We will create an innovative Delivery Plan incorporating new tools to overcome these systemic barriers and support delivery of Liverpool's Net Zero 2030 Action Plan. We will convene stakeholders and integrate private and public Net Zero programmes across Liverpool to avoid duplication and enhance productive collaboration. **Focus themes** include: 1. Financing: recycling of energy cost savings into dedicated fund targeting Net Zero projects with realistic business cases based on whole-life costs. 2. Capacity, capability and skills: expanding and resourcing the newly appointed LCC Sustainability Team, and exchanging best practice with partners. 3. Behavioural change: including changing attitudes to building temperatures, and modal shift to sustainable transport. 4. Regulatory barriers: inadequate requirements on commercial and industrial energy users to change their practices. 5. Governance: pulling together management teams and utility practitioners to ensure funding, support and delivery; compliance with quality standards; allocation and monitoring of responsibilities. 6. Common data standards: for open source and interoperability; to ensure consistent performance reporting; to provide robust evidence of progress and gaps in emission reductions. 7. Strategic grid reinforcement: partnering with SPEN to understand network capacity pinch points, their impact, and means of resolution. **Project tasks** include: * Convene public and private leads of / stakeholders in Net Zero projects across Liverpool City. * Prioritise existing projects in Liverpool against multiple criteria (e.g. value, market-readiness, CO2 impact, deliverability); and identify gaps in coverage. * Assess systemic barriers to domestic, commercial and industrial projects, across heat, power, transport and waste vectors. * Explore approaches with schools and universities to improve climate-related education, and prepare students for participation in the Net Zero economy. * Identify human, labour and capital resources needed to overcome barriers to delivery of Liverpool's NZC30 Action Plan. **Partners** Liverpool City Council will lead the development of a _Net Zero Delivery Plan_. The Council will weave together the many governance strands involved in Net Zero, such as Highways, Parks, Development, Estates, Finance and Street Services. New Resource Partners will lead the Phase One application, deliver project management, and support development of the Delivery Plan, alongside Onward Homes leading on barriers to domestic decarbonisation projects; and Decentralised Energy Solutions leading on regulatory and grid barriers. Key stakeholders include networks operators SPEN, and the Liverpool Chamber of Commerce.
Net Zero Transition Lambeth	Net Zero Transition Lambeth	The project will undertake a feasibility study in the London borough of Lambeth, in partnership with key stakeholders, to accelerate the transition to net zero by testing innovative approaches to unlocking non-technical systemic barriers.

		Similar Council approaches have focused on modal shifts without a joined-up approach, limiting their impact. In order to achieve the necessary scale required, this project focuses on delivering a holistic neighbourhood approach to address building typology and stakeholder challenges. This will unlock the latent capacities already within our communities. Lambeth has assembled a unique set of partners and subcontractors to create a local net-zero systems framework using modern data (LSBU), based on community/grounded projects in Lambeth (Repowering London), validated against monitored data (BSRIA), generalisable into a borough-wide strategy (Parity Projects), and maximising the impact for the local economy and supply chains (Sustainable Ventures). Lambeth has the largest UK cluster of sustainable businesses based at Sustainable Ventures offices, to boost its low carbon economy, one of its priority growth sectors. Lambeth Council's goal is to be net-zero compatible by 2030\. Successful pilots have been established, but non-technical barriers have prevented a sustainable and scalable systems-approach. This project is to scope and implement an area-based approach to net zero systems-change across heat, power, mobility and product manufacture, across: 1. Infrastructure: Create a sustainable and replicable net-zero infrastructure delivery model using an area-based approach across: buildings, transport, business, services. 2. Finance: Use a 'green neighbourhoods as a service' model to address fragmentation in financing and deliver economies of scale. 3. People: A communication strategy for how the net zero transition will benefit how people live and work in Lambeth. A framework to grow knowledge/skills levels and understand local views to feed back into infrastructure plans. 4. Data: Create a sector-leading approach to modern data to link all objectives. Allowing technologies and systems to collaborate without boundaries and improve knowledge/information/data (KID) flow within the supply chain. No existing tool connects Local Area Energy Planning to socio-economic priorities in urban areas, or to community priorities at neighbourhood level. Nor do they specifically address the challenges of retrofitting multi-storey buildings, which is a big problem in Lambeth. This integrated approach will reduce the cost of National Grid's underground network reinforcement works (and waste heat from cable cooling) in Lambeth to local district heating schemes. EV charging infrastructure and community car clubs could be incorporated into engagement and retrofit strategies, and linked to Lambeth's transport strategy.
Essex Net Zero Delivery Task Force (EssNet)	Essex County Council // LAYER BROOK CONSULTANCY LIMITED; UK COMMUNITY WORKS CIC; University of Essex; UK POWER NETWORKS (OPERATIONS) LIMITED; POWER CIRCLE PROJECTS LTD; University of Suffolk	The Essex Net Zero Delivery Task Force (EssNet) will address multiple non-technical systemic barriers which hinder or prevent the delivery of net zero targets. It focusses on the whole net zero system in the county of Essex (heat, power, mobility, product manufacture and usage). It is led by Essex County Council (ECC). EssNet will address, financing; capacity, capability and skills; policy and regulation; system governance and common data standards for open source and interoperability. EssNet will draw upon a mutli-disciplinary team of experts and newly created mechanisms to overcome non-technical barriers and accelerate the journey towards net zero systems in Essex.
Net Zero Pioneer - Manchester	Manchester City Council // Manchester Metropolitan University; EQUANS SERVICES LIMITED; MANCHESTER CLIMATE CHANGE AGENCY CIC; BANKERS WITHOUT BOUNDARIES	**Net Zero Pioneer Manchester** will develop a detailed local plan to accelerate delivery of the City's net zero targets using an innovative place-based, whole-systems approach to unlocking a range of non-technical systemic barriers to implementation. Manchester City Council, with our partners Bankers Without Boundaries, Equans, Manchester Climate Change Agency and Manchester Metropolitan University, recognise the need for significant additional investment in decarbonisation for the city to reach its net zero 2038 goals. Building on the latest innovations from the BEIS-funded 3Ci initiative and similar projects, we will adapt, refine, and test the aggregation of net zero projects (covering power, heat, mobility, product manufacture and usage) from across mixed assets (domestic, commercial, industrial, public) within a local place to attract a blended portfolio of investments that can unlock decarbonisation at scale. We will take an innovative approach by working directly with local stakeholders including regional infrastructure operators, social housing providers, transport operators and Greater Manchester Combined Authority to quantify the scale of existing, locally committed, outcome-seeking funds within a discrete location -- Wythenshawe, a town within Manchester. We will collate these investments to leverage new finance (return and outcome-seeking) by engaging both public and private sectors, creating a blended investment portfolio. Concurrently, we will collate the pipeline of locally committed net zero projects, highlighting the existing decarbonisation pathway, and develop a new pipeline of projects aligned to the blended investment portfolio and informed by the City's Local Area Energy Plan, produced by the Energy Systems Catapult, the Manchester Climate Change Framework and associated research by GMCA. The resulting net zero plan will have an estimated value of £45m. It's creation will enable us to address a range of non-technical barriers including: using outcome-seeking funds to leverage return-seeking investment; modelling revenue streams across a blended portfolio; optimising the balance of cross-vectoral interventions; valuing benefits for outcome buyers; using financial disclosure to de-risk public funds; growing local supply chains and skills opportunities; creating an enabling policy framework; designing the right governance, legal, and contractual arrangements for delivery; engaging residents, businesses, and local communities effectively; and building capacity for net zero delivery within local government and relevant stakeholders.

		This project will move innovation in net zero financing from theory to practice, to develop a plan that can be deployed at scale and test solutions to multiple implementation barriers, and that can be expanded across the city and replicated by other places in the UK.
PIOW-NZ Pioneers Isle Of Wight Net Zero	FUTURE ISLE OF WIGHT CIC // NQUIRINGMINDS LIMITED; ERMC LIMITED; NETZERO BUILDING SOLUTIONS LIMITED; Isle of Wight Council	The Isle of Wight Council Mission Zero Climate and Environment Strategy 2021-2040 sets out the council's aspirations and targets to achieve net-carbon zero in its own operations (by 2030) and as an island (by 2040) with no more than 15% offset taking place. A full Action Plan has taken a whole systems approach to achieving net zero, which includes a detailed emissions baseline for the island and examines ten emissions categories. The three largest sources of emissions for the island are commercial and industrial (23.6%), transport (22.9%) and domestic heating (22.2%). The Plan has identified the following as potential interventions to achieve the desired reductions: * Transport: EV purchase, Community behaviours (cycling/public transport) * Domestic: Retrofit fabric, Alternative Supply (heat pump) * Commercial: Retrofit, Heating supply, Process efficiency However, there are considerable non-technical challenges to achieving these objectives. As the report highlights in section 8 "two of the biggest obstacles being funding and engagement". The PIOW-NZ project will create the following concrete initiatives to address the system non-technical barriers to NetZero transition. **NZ Engagement Team**: End user engagement and behavioural change is the foremost challenge to long lasting change. It is, however, a complex problem, running horizontally across the energy systems, and for which there is no single, simple answer. Our approach will be to innovate-measure-refine-repeat. The team will implement a fail-fast paradigm, to encourage creativity, but rapidly test, keeping what is working and losing what isn't. **NZ Training Hub**: A training hub will be setup up with the objective of ensuring there is sufficient skilled personnel to supply the net zero demand. This hub will initially focus on the immediate building retrofit issue, but can be adapted to other skills gaps. **Financial Analysis and Stimulus Evaluation Unit**: The FASE unit will have the dual objectives of generating the detailed cost benefit analysis for the disparate inventions needed (everything from EV purchase, to heat pump installation to industrial process redesign) and the creation of a financial signposting service to help users and companies access the financial products to deliver the program. **Community Logistics and Supply**: The scale of building and energy fabric retrofit required to achieve the impact designed are huge. Fundamental innovation is needed in both governance and execution. Our proposal includes a novel community owned warehousing and logistics service (a virtual factory) to power transition. **IOT Digital Twin**: Finally, we have the digital infrastructure, which underpins the other initiatives.
Digital Local Area Energy Planning	ADVANCED INFRASTRUCTURE TECHNOLOGY LTD // Perth & Kinross Council; SCOTTISH HYDRO ELECTRIC POWER DISTRIBUTION PLC; Oxfordshire County Council; Dundee City Council	Digital and dynamic approaches to Local Area Energy Planning.
Pioneering net zero delivery for the City of Southampton	Southampton City Council // University of Southampton; NQUIRINGMINDS LIMITED	Cities are responsible for approximately 75% of CO2 emissions, and hence can play a critical role in achieving net-zero carbon. Decisions made by national and local governments, citizens, businesses, investors as well as other actors greatly impact resources and their consumption in cities requiring optimised provisions of services to support better infrastructure and growing populations in a period of increasing climate change impacts. The city of Southampton is no different, it has a variety of specific challenges and opportunities which make it an ideal city to be propelled to net-zero, by 2050 (UK target) or earlier. Southampton has the power to use its political, economic, financial, and social influence to protect the environment and sustainably accelerate the city to net-zero. We will build on these characteristics, opportunities and challenges in a combined techno-economic methodology coupled with stakeholder engagements to support coherent studies to address non-technical barriers to achieve net zero. The methodology and the derived strategies will allow an effective _Plan_ with a coherently structured programme aligned with the vision to deliver net-zero at city scale. The _Plan_ will be delivered through a capable team with high level buy-in from the partners (including the local authority) and stakeholders, coupled with the required levels of resources. An effective reporting mechanism and a risk register will also be established to support the vision and the derived strategies.
Peterborough Accelerated Net Zero (PANZ)	Peterborough City Council // NORDIC ENERGY LTD; EDENSEVEN LIMITED; Cranfield University; ENERGY SYSTEMS CATAPULT LIMITED; PETERBOROUGH	PANZ will create a locally led and inclusive "system of system" approach focused on the identification of opportunities, matching these opportunities to the people that can deliver them, by removing the non-technical barriers that currently prevent this from happening. It may be at an individual, organisational or city-wide level, but it will focus on enabling large-scale and rapid delivery of Net-zero activity. Using these findings the feasibility study will identify, consider and fully evaluate a range of options to overcome these barriers to develop solutions aimed at facilitating accelerated progress towards Net Zero. As part of the development of this proposal, PANZ has identified a range of barriers which will be further

	ENVIRONMENT CITY TRUST	developed during the feasibility study and tested at a practical level, in a local context. The resultant Delivery Framework will set out the critical work required to progress the concept and test the assumptions at scale. Beyond the feasibility stage, PANZ will build upon the outputs to demonstrate and further develop the approach across a number of diverse Pilot sites. The project will take a whole-system approach to decarbonisation, turning these areas into "Positive Energy" locations that generate more energy than they need and become active exporters, spanning heat, electricity and mobility. The project will create new skills and jobs, benefiting the local economy and assist individuals and in particular those in fuel poverty by providing pathways to assistance, methods of reducing cost and developing new financial models and re-investment into the community.
Owning Net-Zero	Plymouth City Council // PEC TRUST; REGEN SW	To have true city-wide accountability for meeting the net-zero target local actors need to be engaged and have ownership of the issue. This is essential in order to create conditions for the decentralisation of new investments and activities in energy efficiency, energy generation, energy distribution, charging infrastructure (marine and terrestrial) and district heat networks. It also allows for delivery of the net zero transition in a way that is more equitable, fair and just. Plymouth can demonstrate lots of local appetite and initiative to achieve this, but actors need to be enabled to deliver the transition in more effective ways. Our innovation will build on opportunities to enable collaborations between local government, businesses, large public institutions, community organisations and social enterprises in the context of the recently completed Waterfront Decarbonisation Plan (LAEP), The Plymouth Plan, and the Climate Emergency Action Plan. This will be achieved through developing a dynamic framework for ownership, governance and decision making that overcomes systemic barriers and is fully integrated into a systems approach to tackling net zero. The integration of finance, knowledge and supply chain barriers and solutions will be considered through the design to provide a holistic template that can accelerate the delivery of net zero and adapt to future needs. The project will explore the digitisation of framework solutions as a means to be provide more dynamic and faster decision making processes and to increase usability, accessibility and engagement through visualisation of processes, progress and opportunities. The feasibility will test a range of scenarios for framework integration and will provide a clear pathway for deployment. The project will undertake in-depth stakeholder engagement to help shape the ownership framework and encourage buy-in to enable deployment following a successful feasibility study. As a bottom-up design community input is essential to its success and its ability to meet local needs. The project is seeking to ensure that the governance surrounding net zero enables true city-wide accountability in order to reach this target by 2030\. The framework we develop will be transparent, dynamic, accessible, user friendly, adaptable and legally robust in order to deliver a fair and just transition to net zero.
Net Zero Belfast	Belfast City Council // ARTEMIS TECHNOLOGIES LTD; CATAGEN LIMITED	Northern Ireland is heavily reliant on fossil fuels costing £9bn p.a. but with huge potential to harness renewables due to its location / geography. The Net Zero Belfast project will assess the potential to conduct green hydrogen (GH) and e fuel testing in the Belfast Innovation District (BID), the results of which will provide assurance on performance, suitability and safety to enable scaling and adoption of GH in NI and the UK. This GH and e fuel capability and capacity could help inform regulation, policy, standards and enable UK scaling to support net zero ambitions by providing accurate measurement of performance and safety. This would give confidence to consumers and society to encourage GH and e fuel adoption. BID's location, unique ownership (single ultimate landowner Belfast Harbour Commissioners) and components (industry, academia, City Deal investment, digital infrastructure, tech capability and skills) make it a perfect place for demonstrating at scale, and across numerous sectors, the use cases for GH and e fuels. BID is home to producers and potential users of GH and e fuels. Unlocking the use cases will accelerate net zero ambitions across NI and potentially the UK. The feasibility will focus on solutions to the non-technical systemic barriers currently preventing deployment of GH and e fuels. This in turn would support delivery of social, environmental and economic benefits providing all our citizens with a cleaner, sustainable, affordable and resilient green energy supply. By growing our burgeoning greentech cluster and supporting the development of a low carbon manufacturing base NI would attract more investment and capital having been established as an innovative net zero hub.
Staffordshire net zero living	Staffordshire County Council // THE GLOBE GROUP CIC; Keele University; EQUANS SERVICES LIMITED; SUSTAINABLE HOUSING ACTION PARTNERSHIP; SOUTHERN STAFFORDSHIRE COMMUNITY ENERGY LIMITED; DECUMAN CONSULTING LIMITED	Addressing global warming and meeting the UK's commitment to be carbon neutral by 2050, will require us to think very differently about how we generate, store, use and preserve energy. As well as increasing the amount of energy produced from renewable sources, this means organising energy systems differently and integrating these, reducing the need for energy to travel long distances which leads to losses of over 9% a year (BEIS 2021). Staffordshire is at the forefront of some of this work already. These new approaches, and the technologies they use, are already being developed and tested on Keele's campus and in Rugeley. Rather than an energy system being owned and run by a small number of large organisations, these new approaches use energy generated, stored and traded locally across whole communities. This requires very different ways of working at the local level, as well as innovations in finance, how systems are run, and the skills of both professionals and communities. But it can bring enormous benefits for energy users and local economies, with the potential for reduced bills, more secure energy supplies, and rapid reductions in carbon emissions. This project builds on the work already underway in Staffordshire and looks at how that can be scaled-up, and to enable more towns and settlements to benefit from this approach. It also looks at how Staffordshire can benefit economically from the energy revolution, moving forward the vision to create a low carbon technologies corridor along the A50/500 Growth Corridor, and preparing future support for local supply chains to become more competitive, build their skills, and accelerate the decarbonisation of their own operations.
FutureFit One Stop Shop (FOSS)	Oxford City Council // Oxford Brookes University; LUCY GROUP LTD; University of Oxford;	Oxford City has been a pioneering place for carbon reduction since it set up its Low Carbon Oxford partnership in 2010 to reduce carbon emissions by 40% by 2020\. That target was achieved and the Zero Carbon Oxford Partnership (ZCOP) has taken its place with a mission to achieve net zero in the City by 2040\. The partnership includes all the major organisations in the city: BMW Mini, the hospitals, both

	Oxfordshire County Council; OVE ARUP & PARTNERS LIMITED; THE LOW CARBON HUB C.I.C.; OXFORD DIRECT SERVICES LIMITED; CENTRE FOR NET ZERO LIMITED	universities, Lucy Group to name a few. ZCOP built on the results of the first Citizens' Assembly called in a UK city to discuss Oxford's response to the Climate Emergency. A route map has been developed and work has started. But there are challenges. The city is small, even though it has a global reputation, and it sits in the most rural County in the south of England, so there is little critical mass available to attract large-scale interventions to improve the building stock. Its supply-chain is therefore small and fragmented; its pool of skills is difficult to grow because the workforce is fully employed. And it has a very diverse building stock, much of it of world-class heritage standard. There are also opportunities. The City has a vibrant innovation ecosystem, particularly around carbon and energy issues, which has a strong track record of attracting funding. It hosts two of the four UK Smart Energy Demonstrators: Project LEO and the Energy Superhub Oxford. The City is also innovative in developing its own services with wholly-owned housing and direct services subsidiaries. It also supported the start-up of the Low Carbon Hub (LCH), a community energy business that now owns £25m of renewable energy assets, and whose profits have to be used for the benefit of the citizens of Oxfordshire. This project seeks to build on the City's opportunities in order to address its challenges. A delivery agency for net zero, working title 'FutureFit One Stop Shop (FOSS)', will create the long-term, sustainable enabling environment necessary to bring new products, services and projects forward consistently, rather than as ad hoc responses to Government funding rounds. This project brings together the main local delivery partners to work alongside key experts, Arup, RetrofitWorks and Centre for Net Zero, to work out the corporate structure, business model and governance structure for the FOSS. Once implemented and proven to work, the FOSS will be a model replicable in many other 'peri-urban' geographies of the UK.
Creating A Market for Place-based OutcomeS (Project CAMPOS)	West Midlands Combined Authority // DARK MATTER LABORATORIES LIMITED; BANKERS WITHOUT BOUNDARIES	West Midlands Combined Authority's Project CAMPOS (Creating A Market for Place-based OutcomeS) aims to tackle one of the biggest non-technical barriers to delivering net zero: the lack of appropriate financial mechanisms to attract scalable funding into place-based net zero solutions. Creating a market for these place-based outcomes, will increase certainty in the financial model: building confidence for funders, encouraging finance to flow into solutions, and accelerating net zero delivery. It will use live net zero transition projects established in the West Midlands to identify, map and quantify outcomes and co-benefits from a wide range of net zero interventions: from warm, energy efficient homes and low carbon heating, to low carbon mobility, neighbourhood regeneration and enhanced green spaces. It will demand test these with a group of potential funders, liability holders and communities, making sure that outcomes not only match funder expectations, but continue to meet the needs of local communities. Success will be the development of an iterative, replicable and scalable financial model that can be rolled out across net zero initiatives in the West Midlands as further funding become available. Ultimately, this could lead to an outcomes-based funding framework that could be deployed nationally, dependent upon, and importantly tailored to meet the needs of the net zero transition pertinent to each place.
Bristol Mission Net Zero	Bristol City Council // BRISTOL & BATH REGIONAL CAPITAL CIC; BRISTOL GREEN CAPITAL PARTNERSHIP CIC	Bristol citizens and businesses are very concerned about climate change in every part of the city and in every walk of life. They want to be part of the solution, want to see changes which benefit their communities in other ways and want to have affordable, accessible ways to make a difference. Many businesses and six communities have already created their own Climate Action Plans to describe the changes they want to make happen. Plus 12 more community plans are in the pipeline. We want to find a way to achieve these business's and community's climate goals faster ensuring they are joined up with the changes we need to make as a whole city. Investment in new low carbon technologies is needed to replace the fossil fuel technology which we rely on for much of our heat, power and mobility. Some of these investments will pay for themselves and generate a return for investors. We want to find a way to bring more investment into climate change projects and do this more efficiently and more easily. There are many businesses already supplying climate change solutions in the city, such as builders insulating homes and heat pump installers replacing fossil fuelled gas boilers with zero carbon technology. We want to help these businesses to grow, to meet the need for climate action, but also to create jobs and training opportunities for local people of all levels of skills and experience. Bristol Mission Net Zero is an ambitious feasibility study to examine what would be required to support communities and businesses to achieve their climate goals, to secure additional investment in new ways and to help businesses grow and create jobs which create prosperity, benefit the whole community and enable people and places to thrive. The study would create a plan for how we might achieve these goals. We could then use the plan as the basis on which to apply for further funding to help deliver the goals. The lead applicant is Bristol City Council. The 2 other project partners are Bristol Green Capital Partnership and Bristol and Bath Regional Capital. The project would be located in Bristol. Project findings would be disseminated widely through the partners' extensive networks. The project would last for 3 months from April 2023.
Shift to Net Zero	ENERGYPRO LIMITED // IBEX EARTH; Surrey County Council; the kent county council; Essex County Council; Brighton & Hove City Council	Shift to Net Zero builds on work undertaken by ep group, Ibex Earth and three local authority (LAs) partners (Essex County Council, Surrey County Council and Brighton & Hove City Council) between April and November 2022\. The work was sponsored by the Greater South East Net Zero Hub (GSEHub) and explored how a regional approach that spanned multiple LAs could be used to support LAs based outside large cities and devolved areas to deliver and finance their net zero programmes. Our research identified a (conservative) capital requirement of £35 billion for net zero and climate projects - ranging from energy efficiency investments across public sector housing; decarbonising a LA civic estate; delivering large-scale renewable generation projects; and deploying district heating networks - up to 2030 across Essex, Surrey and Brighton. Work also demonstrated that non-technical factors (lack of in-house skills, resources, capacity, access to

		finance) are most prominent for LAs that are not large cities or devolved areas. In short, current practices by smaller LAs (county, borough, district, unitary etc) are preventing them from achieving their net zero targets locally. They do not have access to funding to deliver large-scale projects and often adopt a fragmented approach that have high delivery costs attached to them. Our solution is a new Net Zero Delivery Vehicle (NZDV) that is developed, designed and operationilised through a private / public partnership, which includes the partners involved in the GSEHub listed above and Kent County Council. The NZDV enables LAs to shift their approach to net zero, using new frameworks, de-risking investments, building in-house capacity and resources to access private capital to accelerate the pace and scale of net zero programmes, and identifying opportunities to maximise social, economic and environmental benefits locally. The focus of the NZDV is to deploy a place-based solution across the following 6 net zero investment classes: * domestic building decarbonisation * non-domestic building decarbonisation * renewable energy generation * transport decarbonisation * waste management * green infrastructure The feasibility study will enable project partners to coordinate action across the public and private sectors to better understand, design and develop the frameworks that are required for the successful deployment of the NZDV in Phase 2 (including the scale at which the NZDV will need to operate across different geographic locations to attract private capital and determine the various mechanisms that need to be in place to deliver net zero projects across different net zero investment classes).
Oldham Green New Deal Delivery Partnership	Oldham Metropolitan Borough Council // THE SOCIETY FOR THE REDUCTION OF CARBON LIMITED; CENTRE FOR LOCAL ECONOMIC STRATEGIES LIMITED;	Oldham Council has identified a crucial barrier to the delivery of Net Zero projects: **the gap between strategic, spatial energy system planning and citizen and community engagement and involvement**. The disconnect between energy system planning tools and municipal planning and engagement processes is leading to missed opportunities and local opposition to Net Zero schemes that could otherwise make progress to carbon reduction targets whilst offering community wealth, resources and employment opportunities. The Local Area Energy Planning (LAEP) approach enables local authorities to quantify Net Zero projects, but the LAEP methodology takes little account of community needs or priorities in formulating plans. And despite Ofgem's recent Call for Evidence on local energy systems, local authority strategic planning takes little or no account of future energy systems needs and opportunities. When in rare cases, opportunities are identified by local communities, a lack of partnership working between local authorities, development partners, anchor institutions and the communities themselves hampers their delivery, whilst project opportunities deemed to be 'less viable' than others are left unexploited. The innovative Oldham Green New Deal Delivery Partnership approach will see the borough-wide roll out of Community-led Energy Planning, an approach that augments and extends LAEP methodology, putting high quality energy system technical expertise in the hands of communities and citizens, to identify new local opportunities and hardwire buy-in from the start. Our project will bring together strategic energy system planning professionals with local authority statutory planning and engagement to address the disconnect between energy system planning and local authority planning. Finally, we will integrate Community Led Energy Planning into an Oldham Green New Deal Delivery Partnership (GND-DP), ensuring citizen and community engagement is converted into on the ground projects, and using a Community Wealth Building Approach to bring less-viable Net Zero projects into delivery via innovative Public-Community-Private collaboration. Overcoming these non-technical barriers will help realise a roster of 18 planned and prospective Net Zero projects, tackling issues across the energy system, and benefitting from £102.5m of investment and saving over 5,000 tCO2/yr. Using this Phase 1 project, we will author a plan, setting out the deployment of this innovative Net Zero municipal approach in Phase 2\. Through engagement with GMCA, this plan will set out how 'on the ground' unitary council activity can neatly mesh with the strategic set out at a combined authority level.
Net zero and rurality: feasibility study into a cross-sectoral, place-based approach to overcoming non-technical barriers to net-zero living in South Lakeland, Cumbria	SOUTH LAKELAND DISTRICT COUNCIL // HOLKER ESTATES CO. LIMITED; University of Cumbria; KENDAL NUTRICARE LTD; FELL BREWERY LIMITED; PLAYDALE PLAYGROUNDS LIMITED; THE HEATON COOPER STUDIO LTD; OUREA EVENTS LIMITED; CHINNERY HOTELS LIMITED; CUMBRIA ACTION FOR SUSTAINABILITY; PELTA MEDICAL PAPERS LTD.	A partnership of South Lakeland District Council, Cumbria Action for Sustainability (CAfS), University of Cumbria and businesses will work together to help communities, individuals and organisations in South Lakeland District tackle climate change. This feasibility project builds on the work of the Zero Carbon Cumbria Partnership (ZCCP) - a ground-breaking collaboration of 80+ public, private and third sector organisations that has identified the priority actions needed to reduce carbon emissions. The project will establish how 'non-technical barriers' to decarbonisation in rural areas, such as high transport costs, inability to achieve economies of scale, green skills shortage, inefficient housing stock, lack of funding, can be reduced or removed. The outputs of this project will help to inform approaches to overcome these barriers and accelerate the transition to Net Zero in South Lakeland. The project will focus on the priority areas for carbon emissions reduction which have already been identified by the ZCCP and include: improving the energy efficiency of buildings, enabling active travel and electric vehicle infrastructure (mobility), decarbonising local manufacture/production (make and use) and the rural economy (land-use). The project will apply the emissions reduction actions identified by ZCCP to South

		Lakeland, ensuring their deliverability and fundability and feedback to ZCCP to help inform and refine Cumbria wide decarbonisation plans. The project will involve two workstrands: 1. Workshops which will apply an innovative approach, called the Place Standard Tool, to assess the potential for a network of integrated net-zero hubs within the South Lakeland area. Local residents, diverse businesses, young people, community groups and training providers will be invited to identify synergies between different aspects of decarbonisation. The workshops will explore ways in which local business pioneers could catalyse actions which benefit local residents. 2. Alongside the Place Standard approach the project will also assess new forms of finance which will enable the establishment of a rural net-zero-living fund for South Lakeland to overcome the financial barriers to decarbonisation in rural areas. This feasibility study will consider repayable grants/revolving loan schemes, income from individuals and organisations seeking to inset irreducible carbon emissions, community benefit funds, and more. The project will deliver a collaboratively developed plan for overcoming non-technical barriers to enable the reduction of priority carbon emissions in South Lakeland.
Dialogue to Speed Transition to Net Zero Perth & Kinross	Perth & Kinross Council // NICKI SOUTER ASSOCIATES LIMITED; University of Edinburgh	The UK is committed to drastically reducing greenhouse gas emissions, in order to do our fair bit to help limit the disastrous impacts of global warming. Thanks to supportive state policies, there has been a technological revolution in renewable energy in the last 20 years; wind and solar power are now the cheapest forms of electricity generation. Since the war in Ukraine, we also realise that these are good for energy security. We will need more renewable energy but it is also clear that we cannot rely only on such 'supply-side' measures and wait for further technological breakthroughs. We need to simultaneously address demand-side issues and overcome non-technical barriers to the adoption of cleaner technologies and less wasteful behaviours: from heat pumps, electric cars and smart meters to better home insulation and more walking and cycling. Some of the barriers we want to address are about perceptions of issues and institutions, feelings of agency and control and concerns about place and wider issues, All of these need to be explored and addressed if we are to see greater progress towards Net Zero targets and greater uptake of some of these technologies. Each part of the country must do its fair bit, and this project explores how the residents of Perth & Kinross can speed up our transition to a low-carbon future. By organising 'hackathons' and other events, the council will empower young people to articulate their vision of how their village or neighbourhood should start to look in the near future. These sustainability visions will be shared with older residents for a community-wide discussion about the changes we need to make collectively, the difficulties that some people may fear (or may indeed encounter) and the local benefits we should seek to share (e.g. cleaner air, less noisy traffic, more local green jobs). These local 'intergenerational climate action dialogues' will feed into a larger 'climate assembly', a regional event involving citizens and local businesses which will inform and improve council policy, and help us to develop new low carbon projects that are locally developed and supported. We will also hold focus groups with the public and consult with representatives of sectors such as the business sector to probe issues and barriers that relate directly to them.
Net Zero Caerphilly Whole System Decision Support Toolkit (NetZeroCaer)	Caerphilly County Borough council // Cardiff University; WALES & WEST UTILITIES LIMITED; University of South Wales; MARUBENI EUROPOWER LIMITED; ENERGY SYSTEMS CATAPULT LIMITED; PROSONA LTD	This project will carry out a feasibility assessment, developing a prototype Decision Making, Collaborative Working and Engagement Toolkit to overcome the non-technical barriers faced in placed-based whole system net zero initiatives. It will examine non-technical barriers surrounding multiple energy vectors: generation (solar, wind, biomass), network (heat, hydrogen, electricity) and demand (space heating, cooling, transport, and power), which are relevant to and appropriate for our study area, i.e., Nelson in Caerphilly County Borough Council (CCBC). The council has identified the opportunities (in their Decarbonisation Action Plan and Decarbonisation Strategy) to decarbonise this area through multiple green energy sources to meet the local energy demand, which includes anchor loads in the form of council owned assets (buildings, fleet) and a nearby business park. This toolkit will account for decarbonisation of deprived areas of CCBC, while bringing co-benefits of investments in the area in the form of addressing fuel poverty, creating green local jobs, improved air quality, lower energy bills. Because of considering a whole system net zero approach, we have identified a number of non-technical barriers such as financing such projects through a combination of public private investments; knowledge and skills required for long-term sustainability of such initiatives; buy-in from a variety of end users (public, domestic, commercial); understanding the key stakeholders to be involved at different stages of design and implementation; interaction between the existing networks and the proposed new ones covering different energy vectors; and finally, de-risking for future private sector investments. Standard approaches offer options appraisal but are not able to consider the local context on decarbonisation options and timing of availability through different energy networks. We will consider the whole network in a local area including gas, electricity and heat networks but also considering local factors such as geography and ethical water consumption. This approach will allow informed decision making by the local authority and support behaviour and will provide a powerful tool for other local authorities. By supporting local authority investment, it will enable the local authority to act as an anchor for innovation leverage private sector investment in low carbon energy. Through this project, taking a whole system approach, we will develop a decision making, engagement and communication toolkit that enables local councils and energy consumers to make informed decisions for decarbonisation by reducing uncertainty. The developed toolkit will be applicable to the wider area for scaling-up or replicating in other areas where similar opportunities/challenges persist.
Shetland Rural Energy Hub	Shetland Islands Council // AQUATERA LIMITED; COMMUNITY ENERGY SCOTLAND LIMITED	This project, a collaboration between Shetland Islands Council (SIC), Aquatera and Community Energy Scotland (CES), will address the non-technical systemic barriers to implementing rural energy hubs in Shetland. All organisations are partners in the Island Centre for Net Zero (ICNZ), a new 10-year programme that begins summer 2023\. ICNZ creates a pan-island innovation centre that will support Shetland, Orkney and the Outer Hebrides to become lighthouse communities for energy transition, trialing and accelerating solutions to decarbonisation that have replicability and application worldwide.

		Energy hubs that incorporate electric vehicle (EV) charge points, on-site community renewable energy generation and storage, fleet vehicles, information, training and recycling facilities provide an opportunity to co-ordinate decarbonisation efforts within a whole systems approach. However, these hubs are difficult to implement in areas such as Shetland due to low population density, remote settlements, grid constraints and lack of skills capacity. The study will utilise previous and ongoing SIC work to determine achievable pathways for decarbonising key sectors and reaching net zero through an integrated energy hub. It seeks to address the following barriers which we have come across so far: regulation, grid capacity, resource (skills/capacity), behavioural change and lack of data. The feasibility study will be split into seven stages: *Literature review: review previous work by SIC and other agencies within Shetland relevant for rural energy hub creation *Consultation: obtain ideas, options and community buy in to the overall concept *Long-list of options: consider products and services for inclusion within the hub along with their advantages and challenges *Short-listing: workshop with SIC team and relevant stakeholders to distil the longer list into short list of options *Site identification: identify an appropriate site for an initial hub, reviewing what a network of hubs could achieve and where would they be sited *Detailed option analysis: fully develop short-listed options to understand how barriers or challenges can be mitigated *Concept report: highlight findings of the study as well as analysis of a preferred site and options for inclusion in a rural energy hub Overall, this work will unlock the non-technical barriers across transport, energy use, reuse, recycling and waste, business and industry, and buildings, which are all considered holistically within an integrated energy hub, enabling a clearer path to implementation within Shetland and other rural communities. Solutions and data achieved will be able to be rolled out across ICNZ and rural communities nationally.
Net Zero Terraced Street	Rossendale Borough Council // ROSSENDALE VALLEY ENERGY LIMITED; CENTRE FOR ENERGY EQUALITY LTD	Decarbonising urban areas is a complex problem, especially considering the electrification of heat and transport and its impact on the electricity network. The current strategy is around macro (heat networks centred around large loads and peripheral areas) and micro (individual homes) solutions e.g. air source heat pumps (ASHPs). Many communities, especially terraced streets, will not be appropriate for either solution. ASHPs are not feasible due to space constraints, noise implications, efficiency losses, maintenance issues and risk of damage in a confined area such as a small back yard. Macro solutions including 4th generation heat networks proves challenging due to space constraints in locating energy centres and the scale of delivery needed to be commercially viable. Off street parking is not an option for many and affordability of cars is lower than average, yet public transport constraints exacerbate the issues of mobility. This innovative solution overcomes multiple barriers to the rapid deployment of low carbon, affordable heat at community scale. It will produce a replicable delivery model for decarbonisation of terraced housing that can be scaled and is appropriate for those that might otherwise be left behind. The solution identified is a Smart Local Energy System (SLES) which will comprise ambient loop ground source heat pumps (GSHPs), community EV car clubs, community provided storage and solar PV and local peer-to-peer Power Purchase Agreements (PPAs) controlled by optimisation software. The benefits case of the system can simply be summarised that it would reduce bills and peak network capacity by up to 70% compared to the counterfactual of direct electric heating in individual homes. This system relies however on novel arrangements between a variety of stakeholders including the local authority, community energy organisations, resident groups, supply chain, energy suppliers, aggregators and the local distribution network operator. It's value objectives include: *Overcoming barriers to entry for consumers who could not otherwise afford to decarbonise *Protecting consumers from fuel poverty through reduced bills *Accelerating decarbonisation through enabling participation and uptake *Being a replicable model that is scalable and deployable GB-wide This feasibility sets out to create solutions to the non-technical barriers to deployment including: *Commercial and investable business model bringing multiple parties and ownership models together *Engagement and buy in from multiple parties including consumers *Governance including public procurement mechanisms and fair distribution of benefits *Policy and regulatory barriers

		*Supply chain barriers including multiple skill types and technology solutions being offered in a cohesive manner
Pioneer Parks: Modelling a common framework to track and accelerate progress towards Net Zero in National Parks using the One Planet Platform	South Downs National Park Authority // ONE PLANET DIGITAL LIMITED; SOUTH DOWNS NATIONAL PARK TRUST; Lewes District Council	National Parks and AONBs are the UK's 'green lungs', providing a vital public service to help people access the countryside and protect and enhance our cherished landscapes and wildlife. They are also home to vibrant towns and villages, an important rural business community and form a lynchpin of the UK's ambitious nature recovery and climate change targets. The South Downs National Park is the most populated National Park in the UK, with 117,000 people living here and 2.2 million living within 10km of our boundary. The South Downs stretch 100 miles across the counties of Hampshire, East & West Sussex, including 12 Districts and Boroughs and 176 towns and parishes. Over 18.8 million people visit the South Downs each year and the National Park is home to 8,000 businesses, employing 54,000 people. With so many public, private and community-sector stakeholders, we need the tools to enable everyone to work together to move rapidly towards Net-Zero. This is a considerable challenge, with different organisations using different methods and indicators to plan, deliver and track their progress, making collaboration and knowledge-sharing tricky and time-consuming. We need to work smarter to achieve our climate change goals. The SDNPA worked with Small World Consulting to establish a comprehensive, consumption-based, approach to carbon baselining for National Parks. This methodology is now applied across all 15 UK National Parks. Our Net-Zero Living Pioneer Places Award will allow us to work with OnePlanet to model a new cross-sector software platform, bringing together different organisations' strategies and action plans in one shared, easy-to-use, tool, identifying shared outcomes and tracking activity through common indicators that comply with the Paris Climate Change Agreement. This will allow stakeholders to collaborate, plan, manage, report on and share progress towards Net-Zero in a clear, consistent and agile manner. Initially, **we will deliver a Proof of Concept**, working with Lewes District Council and Ouse Valley Climate Action - a multi-partner civil society project, including community energy businesses, NGOs and community groups. We would then **scale up to produce a Park-wide, multi-sector pilot for the South Downs**, incorporating other Local Authorities across Sussex and Hampshire, members of the the South Downs Business Network and key projects. **Our long-term aim is to create** **a 'one stop shop' tool for all UK National Parks and AONBs to manage their carbon descent plans - bringing 18% of the UK land area (23% in England) under one common framework.**
Leicestershire CAN (Collaboration to Accelerate Net zero): A framework for cross-sector decision making, governance and delivery to enable and accelerate net zero action	Leicestershire County Council // ENERGY SYSTEMS CATAPULT LIMITED; GREEN FOX COMMUNITY ENERGY CO-OPERATIVE LIMITED	Leicestershire is a diverse, rural county with a complex matrix of actors and wide variety of actions required to achieve net zero. Having developed, consulted on and adopted a new countywide strategy and action plan in 2022, the Pioneer Places programme offers a timely opportunity to explore effective governance and delivery models to ensure those plans can be executed to maximum effect. Across all levels, activity remains disparate, siloed, reactive and un-coordinated. Efforts that are funded, lack the scale, pace, integration and investment potential required to successfully deliver the Net Zero Leicestershire Strategy and Action Plan. Our project presents an opportunity to develop a cohesive structure between local authority and other actors, capable of long-term place-based net zero planning and delivery, able to effectively react to opportunities and adapt to change. Our project will develop an innovative approach and plan to implement: *An innovative, co-created framework for cross-sector, place-based decision making and governance, defining local mandate and optimising local powers across a place *A vehicle for delivery which breaks down technological and organisational siloes, enabling a whole system approach to net zero planning and delivery *An approach to effectively co-ordinate net zero activity, facilitating scale, investment and agile, fast-paced delivery within a complex matrix of actors *Maximisation of resource, capacity, capability and expertise, including optimisation of the role of community energy. The project will enable us to bring actors together, developing co-ordinated programmes which target priority areas of emissions, understanding the critical interdependencies between heat, power, industry and transport projects, and providing clarity on roles, responsibilities and leveraging the use of local powers. Without the proposed framework in place, we fear that net zero delivery across the county will continue to be ad-hoc, un-coordinated and disparate. Funded activities will not deliver at the required scale and pace to achieve net zero targets in the designated timeframe. Moreover, they will not engender the required level of investor confidence. Our project will develop a structure which: *Facilitates fast tracked decision making; *Supports and promotes accelerated place-based net zero delivery; and *Secures a range of co-benefits through collaborative delivery.

Accelerating York's Net Zero Transition	City of York Council // University of York; ENERGY SYSTEMS CATAPULT LIMITED; ABUNDANCE INVESTMENT LTD; BRIGHTSPARKS AGENCY LTD	Climate change is the greatest threat facing our planet. In York, we are committed to tackling this threat; in 2019, City of York Council declared a climate emergency and set an ambition for York to be net zero carbon by 2030\. Previous research has shown that buildings are the largest source of emissions in York, accounting for over 60% of our locally derived emissions. There are more than 80,000 homes in York, with additional commercial and public buildings. To achieve net zero, over half of these homes will need to be retrofitted (44,000) with insulation, glazing and draughtproofing improvements, as well as installing 73,000 heat pumps. Transport is another significant contributor to emissions in York (27%), with a projected requirement for 91,000 fully electric vehicles to decarbonise the transport system. York has one of the most extensive public EV charging networks outside of London, following a programme of off-street infrastructure provision. In the last 5 years, we have seen a 10-fold increase in the number of charging sessions on the public network, with reports that users are finding it increasingly difficult to access available charge-points. The increased electrification of heating and transport systems across the city will increase York's annual demand for electricity from 773 GWh to 1,273 GWh. Modelling has indicated the potential for rooftop solar PV to contribute 91 GWh per year at an estimated capital cost of £137million. By combining social, capacity, financial and structural approaches, this project creates a holistic and practical application of the outcomes from Local Area Energy Planning - providing a framework for local areas to achieve decarbonisation through local acceleration zones.