



## **A Short Rural Review of LEP Energy Strategies**

### **1. Review purpose**

1.1 This overview document covers seven Local Enterprise Partnership (LEP) energy strategy documents (see Appendix - Table 1) which were selected to provide a broad range of case studies, across geographies, population densities and topologies. They are: D2N2 (Derbyshire and Nottinghamshire); Heart of the South West; Cumbria; The Marches; New Anglia; South East 'Coast to Capital' and York, North Yorkshire and East Riding. The strategies were all written in the 2018-19 period. Their strategic timescales mostly extend until 2030, with some including more high-level objectives to 2050. Steering partners were typically local councils and third sector energy-orientated organisations, in addition to wider community actors (such as universities and trusts) and, in some cases, private sector organisations.

1.2 This overview document will firstly synthesise the main objectives and strategies of the assessed LEPs, before a deep-dive into the influence of rural actors in strategy creation, and potential outcomes for rural areas.

### **2. Main strategy objectives and approaches**

2.1 This section begins with a discussion of the high-level strategies adopted across the documents analysed. It will then focus in on specific objectives.

2.2 Overall, it is clear that the majority of LEPs have placed an emphasis on three central principles. The first of these is innovation. Steering partners have identified regional business cases for the promotion of research and business growth in the fields of energy and low carbon, which will deliver a direct economic stimulus in addition to secondary benefits (e.g. local communities acting as indirect beneficiaries of this growth). Secondly, several LEPs emphasise energy use and consumption as a key principle. For instance, the New Anglia LEP emphasises how consumption must be 'secure, local, affordable and low carbon', while the South East LEP aims to ensure that energy production, distribution and consumption (i.e. the entire end-to-end energy journey) is addressed to maximise regional benefits and reduce the intensity of energy emissions. Thirdly, an implicit sustainable growth agenda is evidenced through the combination of social, economic and environmental outcomes, albeit with various weightings from strategy to strategy (see 2.3).

2.3 The majority of documents take a thematic approach to high-level strategy, by centring on 'strategic areas' or 'priority themes'. Some of these are driven by scientific or technological aims, such as the South East LEP which prioritises low carbon heating, energy saving and efficiency, renewable generation, smart energy systems and a transport revolution. Likewise, the Marches LEP centres on 'grid constraints, agricultural technologies, vehicle supply chains, renewable energy supplies, low carbon supply chains and fuel poverty. Others take a more holistic approach and incorporate socio-economic themes more explicitly; the Cumbria LEP focuses on the key themes of ideas, people, infrastructure, business environment, places and green energy/growth. These lead on to discussion of technological solutions, but generally focus on outcomes for communities, businesses and local development. Finally, some strategies (e.g. New Anglia LEP) take a hybrid approach, wherein social and economic development are balanced with technological goals when it comes to high-level strategy. It is worth noting as an aside that the Heart of the South West LEP is still in the process of producing an energy strategy but provides insight into the broad set of roles that LEPs are expected to play in producing policy recommendations. These are broken down into: leadership and influence; brokerage; aggregation; fund administration; knowledge sharing and pipeline monitoring/signposting.

2.4 In terms of specific objectives, some documents (e.g. for the D2N2 LEP and the Marches LEP) provide specific, quantifiable targets across a broad range of sectors including waste, heating, energy supply, transport, business, carbon intensity and agriculture. However, the vast majority of objectives are qualitative, and vary significantly in their scope. For instance, the York, North Yorkshire and East Riding LEP centre their objectives on place based strategic priorities, high-impact/low-carbon energy tech, circular systems and cross-cutting strategic enablers, whereas the South East LEP has developed 'project models' to help achieve its priority themes, from which 'beacon projects' will be funded. This lack of uniformity across LEP strategies suggests that objectives are not simply driven by differing sectoral focuses. The underpinning methodologies and roles of LEPs also differ, as determined by the influence of their steering partners and stakeholders. As such, a two-tier framework comprising of both 'LEP approach/methodology' and subsequent 'priority objectives/themes' might be a useful way to conceptualise the way in which different LEP strategies have been compiled.

### **3. Rural assessment of strategies**

3.1 This section will cover four broad areas: evidence in energy strategies of rural needs/potential; evidence rural interests were consulted when the strategies were developed; evidence rural representatives are engaged with steering and managing the strategies; and evidence of specific initiatives/projects being supported in rural areas.

3.2 **Rural needs:** some identified rural needs were cross-cutting, particularly regarding challenges in access to electric transport charging points, low carbon energy networks and fast broadband for the operation of smart metering and technology, in addition to a lack of skilled workers. The challenging size and topologies of English rural regions was also highlighted, given, for instance, the expense of laying extensive networks of cables and pipes over expansive, mountainous terrain in Cumbria. On the contrary, the potential for energy strategies in rural areas was proposed in various ways, including exploitation of natural assets; partnerships with supportive organisations (e.g. the Forestry Commission); place-based approaches; carbon-sink led initiatives and alternative fuel sources (such as biomass and biogas).

3.3 The general assumption seems to be that rural energy strategies will draw on nature-based solutions and that there will be limitations in the ability for LEPs to extend provision to the more isolated or rural areas. Clear guidelines will need to be enacted to ensure that energy strategies give opportunities to rural areas, rather than simply take or exploit their choice resources to serve strategic goals. There was some evidence across LEP strategies that this challenge was being actively addressed – for instance, the D2N2 LEP is developing a plan for affordable decarbonisation of domestic heat that addresses fuel poverty and rural requirements, while the Heart of the South West LEP is delivering economic benefits to rural local authorities in the provision of natural energy sources.

3.4 **Rural consultation:** the evidence that rural interests were consulted was mixed. LEPs taking steps to speak to rural stakeholders include: D2N2; Cumbria; the Marches; New Anglia, and York, North Yorkshire and East Riding. Conversely, no (or very little) evidence was found in the strategies of the South East or Heart of the South West LEPs. Where consultation does occur, the emphasis tends to be on local context, the mutual benefits of rural resources and heritage, enabling action at the local level and building on existing partnerships (such as the Low Carbon Lake District Initiative in Cumbria) for best practice. In terms of how rural stakeholders are involved, proposals include leveraging the potential of digital technology, workshopping, representation on steering committees and including a range of rural industry representatives i.e. across landscape management, agriculture conservation, etc.

3.5 **Rural representation:** evidence that rural representatives are engaged with steering LEP energy strategies is more limited. Several strategies allude to rural stakeholders being involved without making it explicit, such as the Cumbria, D2N2, South East and York, North Yorkshire and East Riding LEPs. Many strategies provide for engagement with generic stakeholders, which are likely to include those from rural areas by default. Additionally, where local authority stakeholders are identified as special interests, those with a high proportion of rural residents will likely have greater opportunities to influence policy agendas (e.g. the Marches LEP or Cumbria LEP). A final observation is that rural representatives will need to be represented for both the steering *and* delivery of energy strategies – as such, there needs to be a focus on ensuring end-to-end inclusion, which includes the implementation stage.

3.6 **Rural projects:** specific initiatives and projects being supported in rural areas were frequently mentioned, with varying amounts of clarity and scope. The D2N2 and New Anglia LEPs proposed funding for ‘rural community energy projects’ and ‘off-gas grid low carbon heating projects’ respectively, while the Cumbria LEP focused on heat pumps, an off-gas heating retrofit programme, a renewable heat initiative and community energy schemes. Heart of the South West LEP refers to central Government’s Rural Community Energy Fund. The Cumbria proposal underlines the assumption that rural areas will provide bottom-up solutions to energy challenges, as also proposed by the Marches LEP in ‘promoting the idea of networking solutions with a rural community board’. The most extensive range of rural initiatives was proposed by the York, North Yorkshire and East Riding LEP, which also discussed alternative energy sources and electric vehicle charging infrastructure. As such, this was one area in which there was quite a clear overlap between different LEP energy strategies, albeit with some taking more of a lead. With this clarified, it is likely that LEPs will be receptive to further proposals for rural actors to take a lead in delivering energy strategies, and that integration/economies of scale between LEPs is possible, given the necessary steer from rural interest organisations.

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## Appendix - LEP Energy Strategy Data

**Table 1: Contextual Information**

Explanatory note: Seven LEP energy strategies were selected to provide a broad range of case studies, across geographies, population densities and topologies.

\*In three instances, 'tri-LEP' strategies have been developed, which are comprised of three LEPs in partnership.

| <b>LEP</b>   | <b>Energy Strategy</b>  | <b>Timescale</b>   | <b>Area covered</b>   | <b>Steering Partners</b>   |
|--|---|--|---|--|
| <i>D2N2 (Derby, Derbyshire, Nottingham, Nottinghamshire)</i>                             | Energy Strategy 2019-2030: D2N2 Clean Industrial Revolution - Low Carbon, Affordability, Security | Until 2030   | See column 1  | Nottingham City Council, D2N2 Energy Steering Group.<br>Key individuals: Jonathan Ward, Ellen Cooper-Tydeman, Michael Gallagher.   |
| <i>Cornwall and Isles of Scilly / Dorset / Heart of the South West (joint strategy*)</i> | Joint LEP Energy Strategy – January 2019  | Not specifically stated, but takes region up to 2050 in high-level terms | Cornwall, Dorset and the south west region up to Devon, Plymouth, Somerset and Torbay | Respective LEPs (with funding from BEIS), Carbon Trust, Energy Systems Catapult<br><br>Key individuals: Tom Jennings, Helen Andrews Tipper, Chantalle Thomson (all Carbon Trust).  |
| <i>Cumbria</i>   | Local Energy Plan: A Partnership Plan for Cumbria - July 2018 (consultation draft)                | Most targets discuss 2030 latest, with some 2050 mentions                | Cumbria, including the entirety of the Lake District National Park                    | Cumbria LEP, Carbon Trust.<br><br>Key individuals: Tanja Groth, Micol Salmeri, Rob Franklin, Hector Wilson (all Carbon Trust)  |
| <i>The Marches</i>   | Energy Strategy for the Marches Local Enterprise Partnership – March 2018                         | Until 2031   | Across Herefordshire, Shropshire and Telford and Wrekin                               | Prepared by Encraft Limited (Archie Corliss, Kate Ashworth), with input from Marches LEP, with support from BEIS.<br><br>Additional potential input from Herefordshire Council, Shropshire Council, Telford and Wrekin Council and the BEIS Midlands Local Energy Hub. |

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| <i>Cambridgeshire and Peterborough / Hertfordshire / New Anglia (joint strategy*)</i> | Local Energy East Strategy: An Energy Strategy for the Tri-LEP Area – Winter 2018                          | Until 2030  | Cambridgeshire and Peterborough, Hertfordshire, Norfolk and Suffolk   | The three LEPs ('tri-LEPs'), in addition to: Allia • Anglia Ruskin University • Cambridge City Council • Cambridgeshire County Council • East Herts District Council • Nautilus Associates • Norfolk County Council • Peterborough City Council • Peterborough Environment City Trust • Suffolk County Council • UK Power Networks • University of East Anglia • West Suffolk Councils |
| <i>Coast to Capital / Enterprise M3 / South East (joint strategy*)</i>                | Local Energy Strategy – written 2018(?)  | Until 2030  | The 'Gatwick Diamond' incorporating Croydon, Brighton, Surrey and West Sussex; west Surrey and Hampshire, and Essex, Thurrock, Southend, Medway, Kent and East Sussex respectively (see three LEPs in column 1) | Produced by Siemens and the 'tri-LEP' networks. LEP Strategic Boards, Strategic Energy Delivery Group, Greater SE Local Energy Hub, Las, in addition to communities and neighbourhoods.<br><br>Key individuals: Tim Wates, Dave Axam and Christian Brody   |
| <i>York, North Yorkshire and East Riding</i>  | York, North Yorkshire & East Riding's Local Energy Strategy Towards a low carbon economy – written 2018(?) | Not specifically stated, range of targets for 2030 and 2050 | See column 1  | Leeds City Region LEP in addition to Y/NY/ER LEP. Working across wider geography of North East, Yorkshire and Humber Energy Hub and Northern Powerhouse.<br><br>Key individuals: David Kerfoot   |

**Table 2: Strategy Objectives and Approaches**

The documents were varied in terms of policy development and strategic maturity. I have attempted to focus **more specific objectives** in the left hand column (whether qualitative or quantitative according to the strategy in question), with **high-level strategy** provided for context in the right-hand column.

| LEP   | Key Objectives/Targets/Projects   | High-Level Strategy Context   |
|---|---|---|
| <p><i>D2N2 (Derby, Derbyshire, Nottingham, Nottinghamshire)</i></p> | <p>Quantifiable targets</p> <ul style="list-style-type: none"> <li>• 100% avoidance of recoverable materials going to landfill</li> <li>• At least a 60% reduction against 1990 carbon emissions per capita and a 15% reduction in per capita energy demand</li> <li>• 15% of buildings using low carbon heating and all current building stock be Energy Performance Certificate level C or above where possible</li> <li>• To comply with, and exceed where possible, applicable air quality standards in all locations</li> <li>• 100% low carbon energy supply with 60% renewable generation output and increase of 180MW in electricity storage</li> <li>• Increase the provision of smart transport infrastructure to support a target of 70% of vehicle miles to be Ultra Low Emissions</li> <li>• 100 new businesses in the Low Carbon and Renewable Energy sector and 1000 new jobs</li> <li>• Decouple carbon from growth through the reduction of carbon intensity ratio of growth by 50%</li> <li>• Secure at least £100m of investment in local energy projects with adequate funding for infrastructure development and resilience</li> <li>• 15MW of community energy installed and two industrial sites brought into low-carbon energy generation and innovation</li> </ul> <p>Key Recommendations</p> <ul style="list-style-type: none"> <li>• At least 50% renewable electricity generation by 2030</li> <li>• Pilots to test hydrogen and heat pumps as low-carbon heating options</li> <li>• Buildings which require less energy to heat</li> <li>• Flexibility</li> <li>• Improving sustainable/environmental standards through infrastructure implementation</li> </ul> | <p>Energy-Strategy-specific action areas:</p> <ul style="list-style-type: none"> <li>• Accelerating clean growth</li> <li>• Improving business and industry efficiency</li> <li>• Improving the energy efficiency of homes</li> <li>• Rolling out low carbon heating</li> <li>• Accelerating the shift to low carbon transport</li> <li>• Delivering clean, smart, flexible power</li> <li>• Enhancing the benefits and value of natural resources</li> <li>• Leading the public sector</li> <li>• Leadership in driving clean growth and housing</li> </ul> <p>Linkages to D2N2 LEP strategic areas:</p> <ul style="list-style-type: none"> <li>• Direct funding to where it is needed</li> <li>• Support and inform bids and encourage inward investment</li> <li>• Influence the approach, strategies and spending of local partners</li> <li>• Provide confidence for long-term business planning and investment</li> </ul> |
| <p><i>Cornwall and Isles of Scilly / Dorset / Heart of</i></p>      | <p>(See column to the right)</p> <ul style="list-style-type: none"> <li>• Engage with ELENA (European Local Energy Assistance) project development unit and revolving fund</li> </ul>   | <p>Strategy is fairly <b>embryonic</b> at this point – as of Jan 2019 - largely about the scoping and developing of a more detailed energy strategy in the future.</p>  |

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| <p><i>the South West<br/>(joint strategy)</i></p> | <ul style="list-style-type: none"> <li>• Engage with existing LEP Housing and Transport Groups</li> <li>• Create new Local Energy Groups</li> <li>• Consider creating a future regional electricity system group</li> <li>• An LEP Board member to play the role of energy champion</li> </ul>   | <p>LEPs must play six critical roles:</p> <ul style="list-style-type: none"> <li>• Leadership and influence</li> <li>• Brokerage</li> <li>• Aggregation</li> <li>• Fund administration</li> <li>• Knowledge sharing</li> <li>• Pipeline monitoring and signposting</li> </ul>   |
| <p><i>Cumbria</i></p>                             | <p>Scope is very broad<br/>Objectives broken down by key strategic themes:</p> <p><b>Ideas</b></p> <ul style="list-style-type: none"> <li>• Mitigating and adapting to climate change (Setting Carbon Budgets and Issuing Climate Change Action Plans and Carbon Management Plans)</li> <li>• Becoming more attractive to tourists</li> <li>• Encouraging energy solutions – particularly community energy solutions</li> <li>• Providing bespoke support to small businesses</li> <li>• Promoting sustainable transport</li> <li>• Explore financing opportunities (i.e. renewable energy green bonds)</li> </ul> <p><b>People</b></p> <ul style="list-style-type: none"> <li>• Reduce energy costs, advance economic growth and tackle fuel poverty</li> <li>• Drive local action</li> <li>• Develop finance opportunities i.e. public sector energy efficiency retrofit business model</li> </ul> <p><b>Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Supporting economic growth and sustainable communities</li> <li>• Attract new workers and develop the supply chain</li> <li>• Develop new build opportunities</li> <li>• Find opportunities to strengthen planning policies</li> <li>• Promote efficient heating tech and decentralised energy / sustainable design and construction</li> <li>• Attracting and retaining workers</li> </ul> <p><b>Business environment</b></p> <ul style="list-style-type: none"> <li>• Identifying low carbon alternatives, increasing productivity and profitability and stimulating regional growth for supply of low carbon products /services</li> <li>• Providing a one stop shop for businesses to market low carbon energy options and develop skills, and expand advice services provided under LEP funded triage service</li> </ul> | <p>Strategy is centred around six key themes:</p> <ul style="list-style-type: none"> <li>• <b>Ideas</b> - identifying or adopting new innovations creating a step change towards a low carbon economy</li> <li>• <b>People</b> - creating safe and warm homes</li> <li>• <b>Infrastructure</b> -designing low carbon solutions</li> <li>• <b>Business Environment</b> - driving energy efficiency to increase profitability and productivity</li> <li>• <b>Places</b> - local low carbon energy generation</li> <li>• <b>Green Energy/Growth</b> - advancing innovation across Cumbria</li> </ul> |



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|                    | <ul style="list-style-type: none"> <li>• Potential to create green business digital provision and low carbon energy accelerator/Become actively involved in the NW Energy Hub</li> <li>• Incorporate green education such as energy, water and waste into curricula</li> <li>• Encourage local business accreditation and 'leading by example'</li> </ul> <p><b>Places</b></p> <ul style="list-style-type: none"> <li>• Improve employment opportunities</li> <li>• Create affordable energy, compliant with clean energy targets</li> <li>• Promote community energy projects</li> <li>• Develop community energy, large scale renewables, hydropower, heat pumps, advanced manufacturing, heat networks and bioenergy, and energy storage</li> <li>• Invest in sustainable transport</li> </ul> <p><b>Green Energy/Growth</b></p> <ul style="list-style-type: none"> <li>• Support nuclear sector as key source of green energy (in house/access to new markets)</li> <li>• Create a functioning market for innovation</li> <li>• Develop innovation tech hub, small modular reactors, Moorside nuclear site and national grid upgrade, decommissioning and geological disposal</li> </ul> |  |
| <i>The Marches</i> | <p>Quantifiable objectives:</p> <ul style="list-style-type: none"> <li>• Developing a pilot grid constraints mitigation project as a national demonstrator</li> <li>• Locally generated renewable electricity meeting 50% of local demand</li> <li>• 1000 new jobs in the Low Carbon and Environmental Goods and Services sector</li> <li>• Fuel poverty reduced below 10%</li> <li>• National leader in deployment of anaerobic digestion</li> <li>• Centre for UK agriculture innovation and low carbon transition</li> <li>• Carbon emissions excluding agriculture reduced in line with UK targets, a 57% reduction on 1990 levels</li> </ul>  | <p>Strategy centres around five key priorities:</p> <ul style="list-style-type: none"> <li>• Smart control and mitigation of grid constraints</li> <li>• Innovation in agricultural technologies</li> <li>• Vehicle supply chain opportunities</li> <li>• Local renewable energy supply</li> <li>• Development of the supply chain in key areas of the low carbon economy</li> <li>• Addressing high levels of fuel poverty</li> </ul> <p>These are all derived from five key elements of the LEP's strategy: business support, physical infrastructure, skills investment, low carbon economy and social inclusion.</p> |
| <i>New Anglia</i>  | <p>Qualitative objectives were provided:</p> <ul style="list-style-type: none"> <li>• To put the region at the forefront of the UK's drive towards clean economic growth, reflecting the Government's Clean Growth and Industrial Strategies</li> <li>• To create high-value jobs in the energy sector and broader supply chain that support our wider economic growth objectives</li> </ul>   | <p>Strategy is based on the following themes, designed to ensure that New Anglia remains at 'forefront of clean growth':</p> <ul style="list-style-type: none"> <li>• Clean economic growth (overarching target) – local energy sector,</li> </ul>   |

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|                          | <ul style="list-style-type: none"> <li>• To ensure that our economy is underpinned by a world class energy system</li> <li>• To enable local people to benefit from the many new energy opportunities that will be created over the next decade</li> <li>• To foster innovation, both within the energy sector and across other sectors</li> <li>• To create a dynamic, flexible energy system comprised of smart energy grids and a new distribution network that leads development</li> <li>• To create a local energy market, where buying and selling energy locally brings improved economic resilience for residents and businesses and greater affordability of energy supply</li> <li>• To reduce carbon emissions, in line with national targets</li> <li>• To improve air quality in the LEE area, benefiting the health of all residents</li> <li>• To play an active role with the new energy hub for South East England and ensure that our area attracts and benefits from available investment in energy infrastructure</li> </ul>  | <p>employment opportunities, transfer of the benefits of new energy technologies across sectors</p> <ul style="list-style-type: none"> <li>• Housing growth and commercial site infrastructure – work with UKPN to develop housing, commercial and smart grid opportunities</li> <li>• Secure, local, affordable, low-carbon consumption – increasing energy efficiency and affordability, reducing fuel poverty, reducing carbon emissions and improving air quality</li> <li>• Clean transport networks – support transition to EV, including behavioural change and modal shifts</li> </ul>   |
| <p><i>South East</i></p> | <p>‘Project models’ have been developed as ‘beacon projects’ to help the SE LEP to achieve its priority themes. They are as follows:</p> <ul style="list-style-type: none"> <li>• Low carbon heating <ul style="list-style-type: none"> <li>○ District Heat Networks rollout</li> <li>○ Off-gas grid homes</li> <li>○ Hydrogen injection into Natural Gas grid</li> <li>○ New-build homes on hydrogen grid</li> </ul> </li> <li>• Energy saving and efficiency <ul style="list-style-type: none"> <li>○ Off-gas grid homes</li> <li>○ Energy Efficiency in homes</li> <li>○ SME Support programme</li> </ul> </li> <li>• Renewable generation <ul style="list-style-type: none"> <li>○ Offshore wind development</li> <li>○ Solar and microgrid on landfill sites</li> <li>○ Biomass fuel supply chain development</li> <li>○ Solar energy for Network Rail</li> <li>○ Car parks - solar potential</li> <li>○ Biofuel evolution</li> </ul> </li> <li>• Smart energy system <ul style="list-style-type: none"> <li>○ Solar and microgrid on landfill sites</li> <li>○ Housing and community microgrids</li> <li>○ EV charging/hydrogen-fuelling infrastructure</li> <li>○ Setup of ESCO/MUSCO infrastructure</li> </ul> </li> </ul> | <p>Five priority themes guide the strategy:</p> <ul style="list-style-type: none"> <li>• Low carbon heating</li> <li>• Energy saving and efficiency</li> <li>• Renewable generation</li> <li>• Smart energy system</li> <li>• Transport revolution</li> </ul> <p>The key strategy outputs have been identified in order to:</p> <ol style="list-style-type: none"> <li>1. Enable the tri-LEP region to decarbonise in line with the national trajectory as set down in the Climate Change Act.</li> <li>2. Position the tri-LEP region as a centre for innovation in the low carbon sector; where new concepts and technologies are demonstrated and commercialised to drive clean growth.</li> <li>3. Foster clean growth across the region, supporting fledgling low carbon businesses to evolve and prosper.</li> </ol> |

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|   | <ul style="list-style-type: none"> <li>○ Support developments in CO2 capture</li> <li>● Transport revolution <ul style="list-style-type: none"> <li>○ EV charging and hydrogen fuelling infrastructure</li> <li>○ CNG fleet fuelling</li> <li>○ Ports – modernisation of energy infrastructures</li> </ul> </li> </ul>  | <ol style="list-style-type: none"> <li>4. Ensure that all energy produced, distributed and consumed across the region is clean and low-carbon.</li> <li>5. Ensure that local people and society are beneficiaries of the energy strategy and its delivery, both directly and indirectly.</li> </ol>   |
| <p><i>York, North Yorkshire and East Riding</i></p> | <p>Specific objectives aligned to strategic elements:</p> <ol style="list-style-type: none"> <li>1. Place based strategic priorities <ol style="list-style-type: none"> <li>a. Attract and secure investment for the low carbon transition.</li> <li>b. Enable organisations, communities and businesses to maximise their contribution to, and realise the benefits from, a low carbon economy.</li> <li>c. Provide the strategic drive and economic rationale to shape the development of our Local Industrial Strategy.</li> <li>d. Support increasing collaboration and joint working at a Yorkshire and Northern Powerhouse level.</li> </ol> </li> <li>2. High impact low carbon energy tech <ol style="list-style-type: none"> <li>a. energy efficiency</li> <li>b. electric and hybrid vehicles</li> <li>c. heat pumps</li> <li>d. anaerobic digestion</li> <li>e. biomass for heat</li> </ol> </li> <li>3. Circular systems <ol style="list-style-type: none"> <li>a. reducing use of finite virgin materials</li> <li>b. reducing waste</li> <li>c. designing products to last longer</li> </ol> </li> <li>4. Cross cutting strategic enablers <ol style="list-style-type: none"> <li>a. strengthen local supply chains</li> <li>b. develop skills</li> <li>c. build infrastructure</li> <li>d. secure investment</li> <li>e. develop our knowledge and innovation capacity</li> <li>f. build awareness and change behaviour</li> <li>g. drive policy changes.</li> </ol> </li> </ol> | <p>The following vision:<br/>A resilient low carbon economy, where solutions to address the climate crisis are implemented to make our area a better place to live and create a more competitive economy.</p> <p>Supported by the following strategic outcomes:</p> <ol style="list-style-type: none"> <li>1. Attract and secure investment for the low carbon transition.</li> <li>2. Enable organisations, communities and businesses to maximise their contribution to, and realise the benefits from, a low carbon economy.</li> <li>3. Provide the strategic drive and economic rationale to shape the development of our Local Industrial Strategy.</li> <li>4. Support increasing collaboration and joint working at a Yorkshire and Northern Powerhouse level.</li> </ol> <p>Feeding through the following strategic elements:</p> <ol style="list-style-type: none"> <li>1. Place based strategic priorities</li> <li>2. High impact low carbon energy tech</li> <li>3. Circular systems</li> <li>4. Cross cutting strategic enablers</li> </ol> |

**Table 3: Rural Content Assessment**

| LEP   | Evidence of rural needs/potential from rural areas  | Evidence rural interests were consulted when the strategy was developed   | Evidence rural representatives are engaged with steering/managing the strategy   | Evidence of specific initiatives/projects being supported in rural areas   |
|---|---|---|--|--|
| <p><i>D2N2 (Derby, Derbyshire, Nottingham, Nottinghamshire)</i></p> | <ul style="list-style-type: none"> <li>• ‘Develop a plan for affordable <b>decarbonisation of domestic heat</b> in the region that addresses fuel poverty and urban and <b>rural requirements</b>, with a focus on non-fossil fuel sources such as heat pumps, heat networks and alternative fuel sources’</li> <li>• ‘The respective <b>rural</b> and urban areas possess <b>similar geographies and resource demands</b>, covering 2.2 million residents and generating £46.5bn each year’</li> <li>• ‘The region’s <b>extensive rural nature</b> means it encompasses significant areas where <b>energy infrastructure connections and types can be difficult to install, connect or make viable, at least without financial support</b>. For example, the large number of ‘off-gas’ domestic and commercial properties.’</li> </ul> | <ul style="list-style-type: none"> <li>• ‘The D2N2 region will take <b>multiple approaches to resolve the energy trilemma</b> depending on local context, including demand variations and differing challenges, <b>particularly in rural areas</b>’</li> <li>• ‘The area has significant natural assets with the <b>Rivers Derwent and Trent, the Peak District National Park, World Heritage Sites and Sherwood Forest</b> [...] Additionally, D2N2 is home to a number of strong industries including <b>food services and livestock and arable farming, and significant natural resources.</b>’</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Not specifically</b> – what is stated is: ‘There is a need to engage with the wider community including local residents, Community and Voluntary Sector (CVS) groups, entrepreneurs, energy managers, business owners, procurers and innovators.’</li> </ul> | <ul style="list-style-type: none"> <li>• ‘Identify, support and provide funding for <b>rural community energy projects</b> in D2N2, for example the proposed Rural Community Energy Fund’</li> </ul> |

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| <p><i>Cornwall and Isles of Scilly / Dorset / Heart of the South West (joint strategy)</i></p> | <ul style="list-style-type: none"> <li>• ‘The <b>rural nature of the region</b> is an opportunity for <b>biomass and biogas production</b>. There are local biomass producers in the region and the sector has support from local authorities’</li> <li>• ‘The <b>capital costs of heat networks in rural locations</b> with low density housing’</li> <li>• ‘<b>Poor connectivity</b> exists between local urban and <b>rural areas</b>, within the region itself, and to the rest of the UK [...] However, <b>the rural nature</b> of the region means that there will naturally be a <b>high reliance on private vehicles</b>.’</li> </ul> | <ul style="list-style-type: none"> <li>• <b>No</b> – but there are clear governance strategies in place to ensure rural interests are consulted regularly</li> </ul>   | <ul style="list-style-type: none"> <li>• There is opportunity to investigate the feasibility of a model scenario for sustainable developments that we can deploy across the county, regardless of volumes. <b>The model will need to be applicable in both our urban and rural settings</b>. Special areas like the Lake District National Park shall benefit from this model and focus on energy measures</li> </ul> | <ul style="list-style-type: none"> <li>• The <b>Rural Community Energy Fund</b>, managed by central Government, is briefly mentioned, though without context</li> </ul>   |
| <p><i>Cumbria</i></p>  | <ul style="list-style-type: none"> <li>• When it comes to <b>rural places</b> and homes off the main gas grid, the situation worsens with <b>households spending</b> an additional £1,000.</li> <li>• “The main challenge we face with <b>new developments</b> is to place them in a way that makes our <b>rural areas as attractive</b> as the more urban ones”</li> <li>• The <b>rural nature</b> of Cumbria may <b>prevent the influx of skilled workers</b> and result in a ‘brain drain’ out of the region</li> <li>• <b>EU funding remains a pivotal aspect of business support</b> within</li> </ul>                                   | <ul style="list-style-type: none"> <li>• General recognition of ‘<b>complex stakeholder landscape</b>’ – and use of <b>digital technologies</b> to reach <b>rural stakeholders</b></li> <li>• Cumbria LEP recognises that <b>partnerships and initiatives as conveners of stakeholders and resources</b> can be</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Engagement with the local authority</b> to consider local heat networks, these projects can be supported through the <b>rural community energy fund</b></li> </ul>  | <ul style="list-style-type: none"> <li>• <b>South Shropshire Housing Association (SSHA) and Kensa Heat Pumps</b> have completed an <b>off-gas heating retrofit programme</b> of ground source heat pumps in rural properties in Cleobury</li> <li>• Incentives like the <b>RHI (renewable heat incentive)</b> to</li> </ul> |

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|                    | <p>Cumbria, contributing £72 million to the region as part of the ESIF programme until 2020. ESIF is part of a wider package of European funding that focuses on enhancing research and development activities, increasing levels of SME business support, and <b>improving knowledge and skills across rural communities/sectors.</b></p> <ul style="list-style-type: none"> <li>• <b>Capacity of the grid is limited, especially in rural areas.</b> The costs of upgrading the grid associated with potential schemes have led to schemes either not going ahead or being reduced in their capacity [...] <b>the rural nature of Cumbria will increase the implementation costs associated with renewable projects and limits the feasibility of certain technologies</b> that have urban density requirements e.g. district heating networks</li> </ul> | <p><b>instrumental in enabling action at the local level [...]</b><br/>The Lake District NPP is leading action on climate change at a local level.</p> <ul style="list-style-type: none"> <li>• <b>Partnerships such as the Low Carbon Lake District Initiative</b> are instrumental in leading the way to sustainable economic growth and local action, and <b>can be taken as best practice example to be replicated across Cumbria.</b></li> </ul> |  | <p>install new technologies are needed, especially in <b>rural areas that are off the main gas grid.</b></p> <ul style="list-style-type: none"> <li>• Given the <b>rural nature</b> of Cumbria, <b>community energy schemes</b> offer a constructive solution to tackling problems associated with energy security and cost.</li> </ul>              |
| <i>The Marches</i> | <ul style="list-style-type: none"> <li>• <b>'The rural nature of the area</b> results in: <ul style="list-style-type: none"> <li>○ <b>Comparatively high transport emissions</b> as vehicles have to travel further to their destinations.</li> <li>○ Significant <b>areas off the gas grid</b> leading to the relatively widespread use of high carbon and high-cost fuels.</li> <li>○ Above national and West Midlands average levels of <b>fuel poverty'</b></li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>• SWOT analysis workshop <b>conducted with stakeholders from rural areas</b> i.e. South Shropshire and Hereford</li> <li>• Rural interests <b>represented in formulation of strategy</b> and placed on <b>steering committee</b></li> </ul>  | <ul style="list-style-type: none"> <li>• 'This governance structure should incorporate the Midlands BEIS Local Energy Hub as well as <b>identified actors within the LEP, the three local authorities and local networks and stakeholder organisations'</b></li> </ul> | <ul style="list-style-type: none"> <li>• Plans to <b>phase out the installation of high carbon fossil fuel heating in homes</b> off the gas grid are particularly important for the Marches, <b>given the rural nature of much of the area.</b></li> <li>• Promoting idea of <b>networking solutions</b> via <b>rural community board</b></li> </ul> |

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|                   | <ul style="list-style-type: none"> <li>• ‘Grid constraints within the Marches, as discussed in the following sections, mean that there <b>are particular opportunities for smart grids and flexible power provision</b> to alleviate some of these constraints.</li> <li>• Particular issues arise due to the rural nature of Marches and the <b>long distances that cables have to cover</b> between users which make ensuring power quality more challenging for the network’</li> <li>• ‘Significant is the use of <b>bioenergy and waste</b>, primarily within Herefordshire and Shropshire; again due to the <b>rural</b> nature of these local authority areas this is to be <b>expected and demonstrates the potential contribution of biofuels in this context.</b>’</li> <li>• ‘Electrification of heat provision, which may prove challenging in some <b>rural areas unable to accept significantly greater new demands from homes and businesses.</b>’</li> <li>• ‘Needs of <b>electric vehicles</b> are different in <b>rural areas</b>’</li> <li>• ‘<b>Rural areas with limited broadband and impact on smart meters and smart home technology</b>’</li> </ul> |   | <ul style="list-style-type: none"> <li>• <b>‘Liaise with other rural LEP areas</b> to share knowledge on approaches to tackling grid constraints’ (‘LEP areas that may be beneficial to talk to include Cornwall &amp; Isles of Scilly LEP, Hertfordshire and New Anglia LEPs, and Greater Lincolnshire LEP.’)</li> </ul> |   |
| <i>New Anglia</i> | <ul style="list-style-type: none"> <li>• Across the LEE area, 12% of households have no access to the gas network, rising to 60% in some rural districts.</li> </ul>  | <ul style="list-style-type: none"> <li>• All local authorities in the tri-LEP area were engaged in the endorsement</li> </ul> | <ul style="list-style-type: none"> <li>• Rural councils will be involved in both steering and</li> </ul>  | <ul style="list-style-type: none"> <li>• Develop off-gas grid low carbon heating projects in rural areas</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• There are significant skills barriers that impact the ability of local people to access employment opportunities in the sector, particularly in rural and coastal regions</li> <li>• Jobs and businesses tailored specifically to rural areas are essential in ensuring that rural areas retain and attract young business people. This will help to address a typical migratory pattern of young people moving to urban areas and big cities. The common challenge with all sites discussed is the provision of adequate energy capacity in order to fuel the potential economic development of the site.</li> <li>• The LEE area contributes a higher level of carbon dioxide (CO2) emissions per capita than the national average, largely as a result of high levels of transport emissions reflecting the rural nature of many parts of our area.</li> <li>• the rural nature of much of the area necessitates travel for many residents to access essential goods and services.</li> <li>• Distribution of existing petrol stations suggests that, left to the market, the allocation of rapid charging points may end up being socially suboptimal – clustering in cities and along major highways, but poorly serving rural areas.</li> </ul> | <p>process during the summer of 2018 – this includes borough and district councils in rural and semi-rural regions (i.e. Hertfordshire, Norfolk)</p> <ul style="list-style-type: none"> <li>• The Extended Stakeholder Group included more than 400 people from all 38 constituent local authority areas and related organisations who had been engaged and involved in the project</li> </ul> | <p>project delivery groups</p> |  |
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|  | <ul style="list-style-type: none"> <li>Rural dwellers may choose not to switch to electric transport and continue to make longer journeys (to work, amenities, cultural sites, etc.) using petrol or diesel vehicles.</li> </ul>   |   |   |  |
| <i>South East</i>                            | <ul style="list-style-type: none"> <li>'Phase out the installation of high carbon fossil fuel heating in new and existing off gas grid residential buildings (which are mostly in rural areas)'</li> <li>'Working with the Forestry Commission we should look to establish projects that enable greater utilisation of the region's natural assets and help ensure that rural communities are able to take their stake in the emerging low carbon economy.'</li> </ul> | None.   | <ul style="list-style-type: none"> <li>Only briefly in the context of organisation and funding: 'This groundswell, literally from the 'bottom-up', particularly has the opportunity to leverage public funding to build Neighbourhood Plans that can be the tinderbox for projects and interventions delivery across a wide geographical area. The process is equally applicable from rural villages and coastal communities (or parts thereof ) through to streets, zones, quarters and districts in the most built-up of urban areas.'</li> </ul> | None specifically.   |
| <i>York, North Yorkshire and East Riding</i> | <ul style="list-style-type: none"> <li>The remote and dispersed nature of many rural homes in our area means there are challenges in</li> </ul>  | <ul style="list-style-type: none"> <li>Implied: 'The public sector has an important role to play</li> </ul> | <ul style="list-style-type: none"> <li>Local councils and networks have</li> </ul>  | <ul style="list-style-type: none"> <li>[Used as an example] Small scale anaerobic</li> </ul> |

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|  | <p>ensuring commercial viability of housing retrofits</p> <ul style="list-style-type: none"> <li>• In a largely rural area like York, North Yorkshire and the East Riding, this [LEP energy strategy] agglomeration role is vital to overcome the challenges of dispersed rural settlements and fragmented Local Government structures.</li> <li>• Place-based strategic priorities around industry, bio-economy and rurality.</li> <li>• Support towns, rural communities and businesses benefit from energy independence</li> <li>• Considering the valuable role of rural landscapes as carbon sinks, where emissions can be stored.</li> <li>• The high proportion of remote rural areas limits the attractiveness of EVs and discourages uptake in York, North Yorkshire and East Riding</li> <li>• The existing low energy efficiency of rural housing prevents the wider rollout of domestic heat pump technology.</li> </ul> | <p>too. The strategy aims to amplify their contribution by providing a catalyst for action and a mechanism for coordinating efforts. In a largely rural area like York, North Yorkshire and the East Riding, this agglomeration role is vital to overcome the challenges of dispersed rural settlements and fragmented Local Government structures.’</p> | <p>bought into the strategy</p> | <p>digestion and biomass plants have the potential to use feedstock from farms and food processors to power rural businesses and communities</p> <ul style="list-style-type: none"> <li>• Development of community-owned and community-led renewable energy generation in rural areas.</li> <li>• Electric vehicle charging infrastructure for rural areas</li> <li>• Housing retrofits in remote rural areas</li> <li>• Biomass biodiversity project</li> <li>• Support the development of a network of EV charging infrastructure, particularly in remote rural areas</li> </ul> |
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