

**STOKE ON TRENT & STAFFORDSHIRE  
LOCAL ENTERPRISE PARTNERSHIP  
COMPANY EXECUTIVE BOARD MEETING  
17 SEPTEMBER 2020**

**Midlands Energy Update – Supporting Local Industrial Strategy**

## **1. Overview**

1.1 The two reports attached to this paper provide:

- Midland’s Energy Hub – An Overview which provides a detailed summary of the Midlands Energy Hub work
- The Future of Local Energy Hubs – a collective report of the five Local Energy Hubs in England, submitted to BEIS. The report considers alternative delivery models for sustaining operations beyond October 2021.

## **2. Background**

2.1 The Midlands Energy Hub is a BEIS funded initiative, managed by Nottingham City Council, as part of the Clean Growth Strategy. Its mission is to support the capacity of LEPs and Local Authorities to deliver local low carbon energy projects, reduce carbon emissions, tackle fuel poverty and create new green jobs.

2.2 The Midlands Energy Hub is providing capacity support to the nine Midlands LEP areas and helping to disseminate best practice regionally across the Midlands and nationally across all LEPs. A range of projects are being worked on including: Mine Water Heat Extraction, Large Scale PV and Battery Storage, Network Reinforcement and EV Charging. The Midlands Energy Hub is also delivering the £1.8 million Rural Community Energy Fund, supporting rural, community led energy projects.

2.3 The Regional Energy Team has ten staff with a Project Officer attached to each of the nine LEPs in the region, Mark Gibbons in Stoke-on-Trent & Staffordshire.

2.4 The LEP produced an energy strategy that was published in December 2018 to help secure this additional resource.

2.5 The Executive Board will receive a short update from Michael Gallagher, Regional Energy Projects Manager, and Mark Gibbons, Regional Senior Energy Projects Officer (both from the Midlands Energy Hub).

## **3. Recommendation**

3.1 The emerging LEP ‘Implementation Plan’ will include clean growth aspects that cut across thematic topics within the Local Industrial Strategy and Recovery focus for the Covid-19 pandemic.

**For Consideration:** it is recommended that Board members review the papers attached and raise any questions or queries during the presentation.

**For Decision:** It is proposed that LIS Sub-Groups utilise Mark Gibbon to support their work as and when required.

**Recommendation by:** Alun Rogers, convenor of the LIS Sub Group Chairs.

**Note Prepared by:**  
**Mark Parkinson, Chief Executive**

## Midlands Energy Hub – An Overview

Working in partnership with the UK Government, through BEIS, the Midlands Energy Hub is supporting the delivery of a carbon neutral Britain at a local and regional level. Supporting an evolving programme of works through project development and delivery of de-risked and innovative low carbon technologies that actively progresses the decarbonisation agenda; which help stimulate supply chains, grow the green economy and enhance green investment opportunities across the Midlands. The urgency of this work will increase further with its potential to support the economic recovery at a local and regional level post-Covid-19; putting the low-carbon agenda firmly in the recovery plan.

The Midlands Energy Hub Regional Energy Team operates with a very flat structure (see Figure 1) having an Energy Project Officer in each LEP area providing a local “face” while continuing to report to their accountable body, Nottingham City Council, as the Regional Lead and BEIS. This resource is immeasurably valuable to the Midlands’ LEPs and local authorities, as well as the accountable body, Nottingham City Council. The Hub set up enables rapid communication and knowledge sharing across and between each LEP area alongside the continuing development of low carbon energy projects throughout the regions. Retaining a local to regional to national approach is key to the continued success of the Midlands Energy Hub, enabling them to support the UK government’s decarbonisation agenda through a bottom up approach.

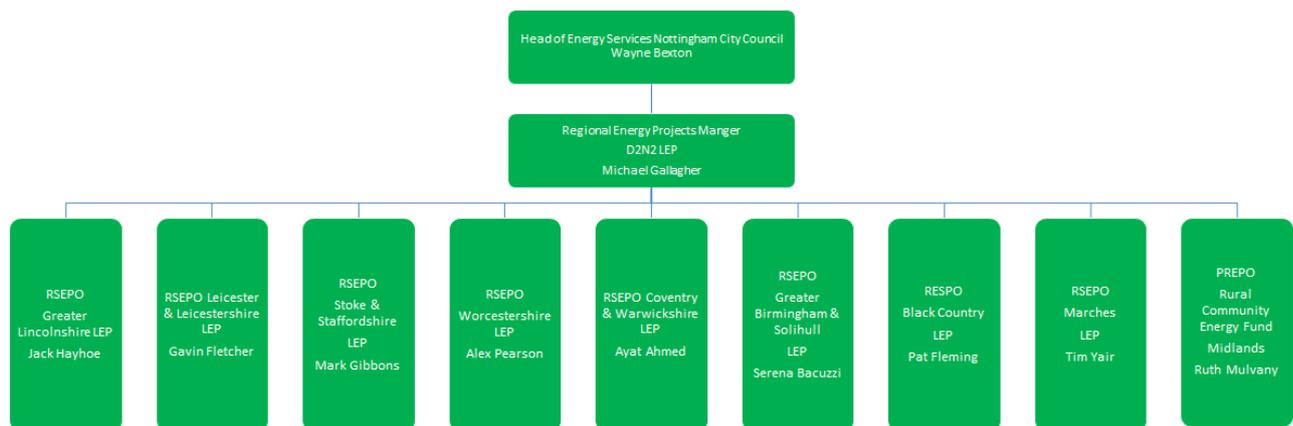


Figure 1: Energy Hub as an information conduit

The Midlands Energy Hub’s presence in the LEPs and with the LAs is an enabling one. Whilst the approaches adopted across the LEPs vary, our presence is appreciated in all of them – the Hub acts as their energy “experts”. Over the last 18 months, the Midlands Energy Hub has successfully supported LEPs and LAs to start developing these energy projects. Many of these projects would not be happening, or would be happening less efficiently / effectively without Energy Hub support. For example, Pat who works across the Black Country LEP has been supporting the development of the Bowman’s Harbour project, which is a 6.9MW Solar PV project that is to be installed on an old Landfill in the city of Wolverhampton. His hard work has helped to develop the project and he is now supporting the project through the planning process.

*“This array is unprecedented in Wolverhampton and without Pat’s knowledge, skills and expertise, the project would not have been deliverable within the timescales. He has driven through the hurdles of bureaucracy in a matter of months.... He was instrumental in securing agreement between City of Wolverhampton Council (CWC) and The Royal Wolverhampton NHS Trust (RWNHST) to deliver clean, green electricity at the Bowman’s Harbour Solar Farm. This development will turn south facing wasteland into a productive solar farm, supplying 6.9MW of life-saving energy directly to New Cross Hospital”.*

**Colin Parr Head of Business Services – Wolverhampton City Council**

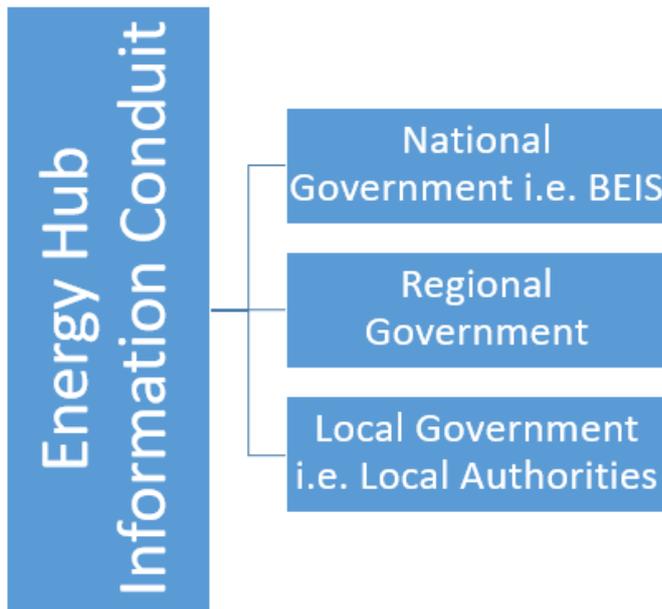


Figure 2: Energy Hub as an information conduit

The Midlands Energy Hub, as detailed within this section, has demonstrated a tangible need for the support they are providing to the Midlands and the overarching decarbonisation agenda. They are ideally suited to continue driving the decarbonisation agenda forward through practical project development and management alongside acting as a rapid, multi-directional information conduit at a local to regional to national level, demonstrated in Figure 2.

Since setting up in October 2018, the Midlands Energy Hub area has recruited a full complement of ten staff. The recruitment process took more than six months. However, it was incredibly important to ensure the right people with the appropriate combination of skills were recruited to the role, and it is challenging competing against the private sector and the higher wages they offer.

The Midlands Energy Hub team is comprised of multi-skilled individuals with a diverse range of experience and a blend of public and private sector backgrounds from across the low carbon sector. This enables them to act as a highly efficient regional unit. It also effectively compliments skill sets across the sister Hubs. The strong relationships that have developed within and across the Hubs is critical to effective working that minimises duplication of effort on project work across the Hubs.

The Midlands Energy Hub is also in a strong position strategically. The Hub is hosted by Nottingham City Council, a leading local authority for energy management. Alongside the nine Midlands LEPs (see Figure 3) who are represented on the Midlands Energy Hub Board, there is also representation from Energy Capital, Energy Systems Catapult and Sustainability West Midlands. The three West Midlands LEPs are represented through Energy Capital as they work together on the Energy Agenda. The presence of these partners on the Board is a huge asset; extending the positive impact of the work through sharing of ideas, an expanded reach across important stakeholder networks, and opening doors for collaboration and providing greater strategic insight to the work being developed. It also helps build the bridge between the different political



Figure 3: Midlands Energy Hub and the nine Midlands LEPs



set-ups across the East and West Midlands, understanding that all organisations are working towards a common goal of Carbon Neutrality.

### Developing Energy Strategies and Project Pipelines

Initially, as the Midlands Energy Hub team came in to post, the writing of the LEP Energy Strategies were work in progress. This enabled the new Hub Team to actively support and guide the final stages of the strategy development and to start identifying appropriate programmes of work / project pipelines. To support this the Hub Leads developed a scoring matrix to determine which projects that came forward were appropriate for Hub support.

The set-up and development of the Midlands Energy Hub has been very well received at a local and regional level. Each LEP area and their constituent local authorities has their own set of support requirements from the Energy Hub depending on existing resources and strategic priorities. The Energy Hub carefully balances these asks against their own KPIs that have been agreed with BEIS.

<p>Core asks of the Energy Hub include:</p> <ul style="list-style-type: none"><li>• Research viability of conceptual projects</li><li>• Support feasibility and business cases</li><li>• Early project concept development</li><li>• Develop strategy to action to projects</li><li>• Provide development grant e.g. for planning, legal, grid connections</li></ul>	<p>Auxiliary asks include:</p> <ul style="list-style-type: none"><li>• Delivery of presentations to key stakeholders</li><li>• Provide general technical advice and support</li><li>• Organise / attend events</li></ul>
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The Energy Project Officers are working on developing an exciting range of energy projects. Example projects in development with the support of the Midlands Energy Hub include:

- Heat networks; Including utilisation of sewer heat reclamation and mine water heat
- Electric Vehicle infrastructure projects
- Solar PV Projects; Including SPV on local authority assets and large scale field arrays
- Garden villages

Support to the projects depends on the skills of the project sponsor, time required and the skills of the Hub. Support provided by the Midlands Energy Hub has included:

- Funding bid writing and support
- Feasibility study support
- Business case writing and support
- Utilisation of the Hub networks
- Problem solving, working to remove barriers
- Project research and support
- Workshop facilitation
- Project identification

Since the Midlands Energy Hub's initial set up, they have been able to provide BEIS with a clearer understanding of what is happening at a local level across the Midlands. The Hub has provided a clear picture of potential project pipelines, lending support to projects where capacity and knowledge gaps were preventing or slowing their development.

The Midlands Energy Hub as also taken on additional projects for BEIS, including:

- Parish Council Carbon Foot Printing
- Rural Community Energy Fund

While the success of the Project Officers is a testament to their hard work and commitment, this level of success could not have been achieved without the support of the accountable body, Nottingham City Council, and the LEPs, local authorities and strategic partners (Energy Capital, Energy Systems Catapult, and Sustainability West Midlands).

## Smart Working and Facilitating Local Authority Collaboration

The Energy Hubs are demonstrating that a small team can have a big impact over a large regional geo-political area. However, like the LEPs and local authorities they are supporting, the Energy Hub teams are stretched and working beyond capacity. Therefore, it is important that smart and efficient ways of working are utilised. One approach that is being trialled, with early success, at the moment is bringing local authorities across a County area together for regular workshops that look to address the challenges laid out in their local LEP Energy Strategy and to start developing a tangible over-arching action plan for the region, that they are then able to start delivering on. This enables a project officer to support a number of local authorities simultaneously, instead of working with them all on an individual basis. The model for this is very simple, as shown in Figure 4.



Figure 4: Model of local authorities working together to maximise resources and share ideas to deliver tangible actions in support of the overarching LEP Energy Strategy.

This programme is currently being run across Nottinghamshire, supported at Chief Executive level and facilitated by the Energy Hub, with previous and planned workshop themes including:

- Decarbonisation of leisure centres and other energy intensive buildings
- Improving the sustainability of existing housing stock
- Planning for sustainable new build
- Decarbonisation of vehicles
- Installation of EV infrastructure
- Green procurement and joint investment
- Offsetting and investment in green energy

There have been some very clear actions taken from the previous workshops, which are ongoing, examples of these actions include:

- Conduct desktop feasibility studies for Solar PV on local authority leisure centres across Nottinghamshire
  - 22 Desktop feasibility studies completed so far
  - Potential for a total of 1.8 MWp of Solar PV
- Conduct a review of social housing maintenance schedules to identify what maintenance works can be amended to enable the take up and installation of energy efficient and low carbon technologies in a phased and cost-efficient manner.
- Develop a low carbon checklist for planners, to be followed up by training
- Develop a county-wide Low Carbon SPD framework. Tasks agreed by the sub-group include:
  - Information gathering and audit of extant low carbon policies in the County
  - Best practice in the County and elsewhere
  - Preparation of a scoping report and proposals for taking the SPD forward for discussion at the next Nottinghamshire Planning Policy Officers Group



This work has demonstrated that there is a real positive appetite for local authorities to collaborate, working together to achieve their decarbonisation agendas, which will stimulate local supply chains, support and create local jobs and provide an example to the private sector that can be adopted and followed. It also offers the opportunity to work at scale and reduce costs as a result. Project officers in other areas are now considering adopting this model into their areas.

What has been critical to the success of this is the “buy-in” at senior level. In this instance, the Chief Executive of Rushcliffe Borough Council has taken a strong leadership position and with the support of the Energy Hub, enabled the Nottinghamshire local authorities to work collaboratively on this agenda.

## Overcoming Challenges

The Midlands Energy Hub works hard to overcome challenges and barriers that are slowing or preventing the development of energy projects. Ultimately, the crux of resolving the challenges lies in ensuring the following:

- Ensuring that the right technology or combination of technologies is applied
- Identifying the most suitable way to finance each project
- Having the right resource, experience, knowledge and time to develop each project
- Ensuring that the quality of the work is maintained, particularly when working at scale
- Ensuring a robust and affordable Operation and Maintenance plan is in place

An example of where the Midlands Energy Hub has overcome a challenge is the Warndon Super Socket project, which looked at overcoming grid capacity challenges in Worcestershire. The Midlands Energy Hub worked to firstly to locate the substation with the issue, then to find the right contacts within the local ‘Distribution Network Operator’ to discuss the problem. The DNO were unaware of the queue of projects (potentially a £7M pipeline) affected by the lack of capacity at the substation and the Energy Hub brought these to their attention. Discussions with the DNO identified that the problem was to do with a particular piece of equipment (Switchgear).

The issue was discussed with a number of DNO staff over a 12-month period to foster an understanding and promote a solution. Through the work of the Midlands Energy Hub it was established that a work package due to be implemented in 2021 would address the issue at the substation. This was communicated to the various companies and installers who had projects in the pipeline and gave them a level of certainty that they did not have before. With expensive reinforcement costs now out of the financial models, most of the pipeline projects became economically viable.

## Financial Models for Energy Projects

One area of support that local authorities often need is with the development of robust financial models that support their business case for low carbon energy projects and provides their finance teams with the

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*“Making a pledge to be carbon neutral by 2030 is one thing, making the changes to our estate, fleet and services in order to deliver it is another. Not to mention working with local communities and businesses so that they can all play their part too.*

*[The Hub Lead] has supported me with setting up a Nottinghamshire wide local authority working group with buy in at the most senior level. We are able to share best practice, work together, learn together and also plan for the future proactively.*

*Workshops have been action orientated and have covered planning, housing, transport, fleet, EV infrastructure, procurement, leisure and estate. We will also be exploring opportunities for joint off-setting and investment in green energy.*

*[The Midlands Energy Hub] have provided challenge, support, expert insight and have assisted the local authorities on getting to a place where we can all plan confidently for the future.....*

*I can see a definite role for the Midlands Energy Hub over the next 10 years and beyond in order for the government to deliver on its pledges that the country become carbon neutral in the future.”*

***Kath Marriot Chief Executive Rushcliffe Borough Council***

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confidence to support the progression of the projects. A detailed understanding of energy project finance was identified as a skills gap within the Energy Hubs and the local authority project teams they were supporting.

With project finance being a critical part of project development, a training course was developed with the EU Energy Centre with the aim to enable the team to “bridge the gap” in the project development process. This has given the Hub team sufficient understanding of the terminology and mechanisms that will allow them to support the development of base financial models and enable them to have productive conversations with public and private sector finance teams.

The training was very successful, and the Energy Hub is now in the process of developing a base financial model that can be applied to a range of energy projects. The financial model is expected to be completed imminently; this will then be reviewed by a third party to assess its functionality and suitability for its intended use. This financial model can then be used, with confidence, to support a range of Energy Projects across the Hub area.

### Rural Community Energy Fund (RCEF)

The Midlands Energy Hub manages the RCEF fund for the Midlands Region, providing grants to support communities in rural locations to develop their energy projects. The work of the Midlands Energy Hub on RCEF has been greatly appreciated at a community level. Harbury E-wheels who successfully gained grant funding fed back that:

*“I believe that the more that you and others from the Midlands [Energy] Hub reach communities to cultivate ideas and encourage ambition, the more potentially successful projects will come forward. This is best done by physical presence..... You played a vital role in that, supporting us all the way through and offering advice when we needed it. It is not a simple process and the combination of face to face meetings and email and phone support that you gave is what rural communities need in order to succeed.”*

### Outreach Activity: Events & Newsletters

The Midlands Energy Hub Board includes Sustainability West Midlands (SWM) and Energy Systems Catapult (ESC), and Energy Capital which helps to expand our outreach activity, share ideas further and reduces the likelihood of duplication of work. For example, SWM has supported the Hub to raise local awareness of the opportunity for, and benefits of, local energy investment; through promotion of Energy Hub news, jobs, events, reaching 1,000’s of stakeholders across the region. SWM, Energy Capital and ESC have also been proactive in making project development connections where possible and have been a real asset to our region and the work of the Midlands Energy Hub.

The Midlands Energy Hub, in partnership with UK100 and with the support of Siemens, hosted a workshop in their region, “Financing Energy in the Midlands” held at Leicester City Hall. The focus of the workshop was on green financing and intended to provide the public sector with an insight of the fundamentals for the delivery of successful clean energy projects and the options available for low carbon investment.

Two panel sessions lead the discussions around the challenges and opportunities for the development of investable projects and the role of private finance in helping the public sector to deliver on the carbon reduction targets in response to the climate emergency. The discussion deepened during the roundtable sessions lead by the event sponsors: Abundance, Leapfrog, SSE Enterprise, Siemens and Octopus. The event was attended by over 70 delegates from local authorities, LEPs, energy solutions providers and investors from across the Midlands.

The Energy Hub is also actively engaged with key events happening across their region (and wider). They are relied on to deliver presentations and panel discussions at high profile events including Battery and Energy Storage Conference, APSE, Solar and Storage Live. They are also connected into different academic networks that invite team members to participate in workshops and roundtables that inform academic thinking and potential future policy recommendations.

Newsletters have also proved to be an effective engagement tool to communicate the work of the Hubs and share knowledge with Energy Hub contacts. The Midlands Energy Hub produce a quarterly, 4-page newsletter that has been well received across the region.

### Developing Toolkits and Templates - Midlands Energy Hub

To support the LEPS and LAs across all Hubs the Midlands Energy Hubs have developed a guide, for use across all Hub areas on: **Establishing public-private Joint Ventures and partnerships for investment in and delivery of energy schemes**



Figure 5: Public Private Joint Venture Guide - Overview

This guide has been produced to highlight the potential opportunity of joint venture working and enable local authorities, with the support of Energy Hubs, to attract investment to deliver local and regional energy projects at a greater scale and scope. Depending on the partner selected, as well as finance, they can bring expertise in de-risking, delivery and long-term stewardship of projects. The intended outputs and outcomes that have shaped the report are demonstrated in Figure 5. A key aim is to help local authorities explore and develop Joint Ventures that are appropriate, effective and sustainable. The partnership approach can deliver projects in combination with each other and/or in a portfolio approach to deliver cost efficiencies, stronger commercial performance, less disruption, scale and a less siloed delivery model.

This guide was written with support from Nottingham City Council and with guidance from Leapfrog and SSE Enterprises, and has been well received by local authorities.



## Joint Working

The Midlands Energy Hub, made up of the 9 LEPS across the Midlands, recognises that collaboration with local authorities, LEPS, the private sector and other Hubs, alongside other key stakeholders like universities are critical to the successful development and delivery of energy projects. The collaboration work has been very well received. For example, the collaboration between the Midlands Energy Hub and the North Energy Hub to enable the development (ongoing) of a mine energy white paper to help accelerate the delivery of mine energy schemes in the UK.

## Conclusion

The Midlands Energy Hub has achieved a significant amount in a short space of time; building a strong network across the Midlands and beyond and supporting an exciting and evolving project pipeline. The Midlands Energy Hub is eager to continue to develop this work; supporting local, regional, and national government as well as other organisations to achieve their decarbonisation ambitions.

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“Working through the BEIS Energy Hubs has provided a valuable platform to identify and progress collaborative working across LEP geographies, and indeed across wider Hub areas. A successful example of this has seen the Hub networks drive extensive cross-sector participation in the Mine Energy Taskforce. Initially convened in the NEYH Hub, and subsequently identified as a key collaborative opportunity between the NEYH and Midlands Hub, critical support from both Hubs has enabled the work of the taskforce to progress to the next stage in the form of a White Paper on mine energy. Moving forward wider engagement will continue to be sought through the Hubs and with other interested parties.” - **Andrew Clark Energy Programme Lead North East LEP**

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**THE FUTURE OF LOCAL ENERGY HUBS  
WITH A REVIEW OF OPTIONS FOR SELF-SUSTAINABILITY**

## Local Energy Hubs on behalf of Local Enterprise Partnerships

Version 6.0 – Submission to BEIS

July 2020

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## EXECUTIVE SUMMARY

This report is the result of the collective work by the five Local Energy Hubs in England to consider alternative delivery models for sustaining their operations beyond October 2021. This includes considering options for self-sustainability which is one of the four objectives for the hubs set by BEIS at inception.

The report therefore considers the progress that has been made since the creation of the five Hubs in England, and how they have delivered against their original objectives set by BEIS.

So far the Hubs, by providing the expertise needed to bridge the gaps preventing project development from progressing, have successfully developed a strong pipeline of **183 projects**<sup>1</sup> valued at **£850 million**, of which an estimated **£570 million** is potential private sector investment. After eighteen months of operational delivery, the Hubs have secured **£2.4 million** for project development and helped organisations to finalise the business case for **£84 million** of capital investment. A further 517 projects are on the longlist, the value of which has been estimated by comparison to the shortlist to be in the order of £1.8 billion. The Hubs do not have staff capacity or development funding at present to develop the longlist. Further detail on Hub delivery against their wider objectives is contained in Annex 1, including a breakdown of the project shortlist, by theme.

Nine different models were considered as possible structures for the Hubs going forward to meet the challenges of delivering to the scale that has been identified. The strengths and weaknesses of each approach were considered and are summarised in table 1 below (the self-sustaining options are models 6 to 9).

Table 1: Summary of delivery model evaluation

DELIVERY MODEL	KEY CONSIDERATIONS	RESULT
0. End Hub Programme	<i>Project pipeline will lack support and resources unless alternative model created.</i>	NOT RECOMMENDED
1. Business as Usual	<i>Year-to-year funding creates uncertainty in programme delivery.</i>	NOT PREFERRED
2. Business as Usual with four-year funding	<i>Cannot address full scale of demand identified.</i>	NOT PREFERRED
<b>3. Enhance Core team</b>	<i>Provide all LEPs with dedicated support; increase scale of delivery/develop specialisms.</i>	<b>PREFERRED</b>
<b>4. Development funding model</b>	<i>Can provide grant funds to later stage projects to support delivery to investment readiness.</i>	<b>PREFERRED</b>
<b>5. Net Zero/Post-Covid Recovery Model</b>	<i>Significant resource required for a place based ambitious game changing approach to decarbonisation at a local level.</i>	<b>OPTIMAL</b>
6. Equity model	<i>Fund management expertise would be required with Hubs playing a very different role than established to provide.</i>	NOT RECOMMENDED
7. Low interest loan model	<i>SALIX exists to provide low cost loans into energy projects.</i>	NOT RECOMMENDED
8. Advisory model	<i>Hubs might raise revenues for one-off reports/services; risks diverting resources from core services.</i>	NON-CORE OPTION
9. Contract Suite	<i>Hubs might charge for template documents.</i>	NON-CORE OPTION

<sup>1</sup> Pipeline position at January 2020

Our evaluation of the options (Section 4) finds that five options are currently viable as funding options for the Hubs going forward

- Funding models 1 and 2 represent business as usual options which would maintain Hub delivery at current levels
- Funding models 3 and 4 (the *enhanced core team* and *development funding model*) are preferred options, as they would allow the Hubs to increase the scale of delivery to cover the potential that has been identified. These would enable projects from the longlist to be brought into the delivery programme, while also enabling additional projects that are not yet on the long lists but are coming forward e.g. following council climate emergency declarations. This model was identified in answer to the BEIS question on the level of support needed to deliver the project pipeline, with a further variant identified as the required support needed to deliver the Hubs' long list projects. To deliver the preferred model we recommend:
  - £40m of core funding for four years to provide an enhanced service
  - £90m project development funding for local energy projects for four years
  - £20m of community energy funds for four years
- Funding model 5 is the optimal model, as this would create the step-change in the level of impact needed to boost the green recovery over the longer term and help create the local capability needed for the transition to net zero. This model was identified in answer to the BEIS question of the level of support needed to realise the national ambition. Further work would be needed to establish BEIS priorities given recent announcements.

This report therefore makes the case that continued core funding from central government is required to sustain the Hubs, enabling their highly valued independent and impartial approach to be maintained. The Hubs are addressing a market failure by applying sector expertise to early stage project development; this is a high-risk activity and includes the challenge of engaging and mobilising multiple stakeholders. As with the funding model for LEPs themselves, core funding can provide a platform for the Hubs to attract additional revenues. Hubs can each determine the approach that best fits their local context.

Now the Hubs are established, they can become vital delivery programmes that fulfil an essential role between central government and local stakeholders. They can support the implementation of national energy efficiency and net zero decarbonisation policy frameworks. In the future the Hubs can play an increasing role supporting regional delivery of national policy frameworks for Net Zero. This must be set in the context of Covid-19 recovery. The Hubs might be integrated into the delivery of a range of place-based interventions aligned with devolution and shared prosperity.

## 1. INTRODUCTION

This report has been written collaboratively by the five Hubs for consideration by the Department of Business Energy and Industrial Strategy (BEIS).

**Section 2** of this report provides a background to the hubs. The objectives of the Hubs are stated along with a summary of the activities that have been undertaken in order to meet these objectives. Since they were established some additional activities have been added to the scope of the hubs and these are described. Annex 1 of the report provides a more detailed survey of the activity that has been delivered by the Hubs between April 2018 and January 2020.

**Section 3** of the report considers the changed context in which the Hubs are now operating. The work of the Hubs should be aligned with future national policy which responds to governments net zero 2050 target, as well as Covid-19 Recovery Plans and ongoing challenges to delivery which have been identified.

**Section 4** of the report includes an evaluation of potential delivery models for the Hubs. One initial objective of the Hubs was to identify potential models for financial self-sustainability after the initial programme. In the context of meeting the net zero target, BEIS have also asked the Hubs to consider what funding model would allow them to a) realise the existing project pipeline and b) attain a higher level of delivery based on national potential.

**Section 5** of the report makes a recommendation about the preferred and optimal funding models for the Hubs after October 2021. The scope of activity that could be undertaken through this model and the budget implications are summarised. Management and governance implications are highlighted.

## 2. BACKGROUND

### 2.1. Local Energy Hubs

In 2017 BEIS allocated £1.6 million for the development of Local Energy Strategies by each of the Local Enterprise Partnerships (LEPs), which included identifying a pipeline of energy investment opportunities in each LEP area. Following on from the strategies, BEIS allocated funding to support the capacity of LEPs and local authorities to play a leading role in delivering low-carbon economic growth. The model for delivery of this support was the establishment of five Local Energy Hubs in England to support the capacity of LEPs and local authorities to deliver energy projects. Each Hub was set up to serve a number of LEP areas which were agreed by mutual consent with the constituent LEPs, with each Hub developing a governance structure in which LEPs are represented and involved in strategic decision-making.

The Hubs became operational in 2018/19, core funding of **£4.94 million** for local energy capacity support was provided by BEIS in March 2018. Additional funding has been provided on an annual basis since, bringing total core funding to March 2020 of **£8.45 million**. This funding has supported a three-year programme of activity delivered by **38** staff. The current programme is due to end in October 2021.

Since the development of the Local Energy Strategies and formation of the Hubs, the Government has committed to net zero by 2050, and many local authorities have declared Climate Emergencies.

### 2.2. Scale of Opportunity

The Government's commitment to Carbon Net-Zero by 2050 will require a significant transformation of the buildings and transport sectors by 2030. It means that the UK will need to change the way consumers and communities, use, buy and sell energy and how energy supply and demand are managed across the distribution and transmission networks.

The Committee on Climate Change's Central scenario which underpins its advice on the Fifth Carbon budget, involves extensive electrification. Rapid electrification to meet a net zero target and to bring forward deep decarbonisation of the heat and transport sectors would require 37 million electric cars and vans and 15 million hybrid and electric heat pumps by 2035<sup>2</sup> (9 million electric vehicles/vans and 2 million heat pumps by 2025). To support this new renewable generation capacity is estimated at 54GW solar PV, 35GW onshore wind and 45GW offshore wind.

The scale of opportunity for both investment and job creation is significant, to meet net zero 2050 National Grid<sup>3</sup> estimate that 313,800 jobs could be created in England in operation, generation, transmission, distribution and retail of energy as well as those in the supply chain related to building, upgrading, maintaining or operating infrastructure. Scottish Power estimate that by 2050, £284.6 billion will need to be invested in charge points, heat pumps and electricity networks to meet net zero, supporting the creation of 115,780 skilled jobs<sup>4</sup>. The Energy Efficiency Infrastructure Group have estimated that £75 billion would need to be invested to bring housing to an EPC C by 2030, creating 128,600 skilled and semi-skilled jobs.

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<sup>2</sup> [Accelerated electrification and the GB electricity system \(2019\) Vivid Economics, Imperial College London](#)

<sup>3</sup> [Building the Net Zero Energy Workforce \(January 2020\) National Grid](#)

<sup>4</sup> [Zero Carbon Communities \(2020\) Scottish Power](#)

At the time of writing this report, the UK is in the midst of the Covid-19 pandemic. Some commentators consider that Covid-19 will bring with it a potential "market reset", with issues of social value, public sector intervention and green energy at the heart of many policies identified to help kick start or "re-boot" the economy and a green recovery.

In this changing marketplace, it is clear that local and combined authorities will have a role to play in bringing forward the low-carbon economy on a local and national basis. Commentators anticipate that as the UK emerges from Covid-19, that such initiatives will gain greater momentum as the community and behavioural change will see a greater shift in investment in technologies and industries where it sees longer term benefits to society and the environment. This is a good example of how the Hubs are well placed to support the public sector to bring forward energy infrastructure and supply where there may be, for the time being, less market engagement, but clear longer-term benefits and payback.

### 2.3 Objectives of the Local Energy Hubs

The original objectives of the Hubs as identified by BEIS are:

1. Increase number, quality and scale of local energy projects being delivered
2. Raise local awareness of opportunity for, and benefits of, local energy investment
3. Enable local areas to attract private and/or public finance for energy projects
4. Identify working models for teams to be financially self-sustaining

The intentions were further clarified by BEIS:

*Working in partnership with the UK Government, the Energy Hubs support the delivery of net zero economy by:*

- *Supporting the delivery of energy strategies at each of the 38 LEPs outlining the specific opportunities and projects at each LEP.*
- *Increasing capacity at a local level to develop and deliver energy and decarbonisation projects.*
- *To provide BEIS with a line of sight to delivery of local projects supporting BEIS to identify support mechanisms to accelerate progress to a net zero economy*
- *Increasing the scale and deployment of energy projects by collaborating across LEPs, aggregating projects, facilitating joint procurement, and aiding cross LEP communication.*
- *Acting as a conduit and delivery mechanism for government funded energy programmes such as RCEF*

*By undertaking these roles, Local Energy Hubs are to accelerate project development and delivery, de-risk innovative low carbon technologies, stimulate supply chains, grow the green economy and maximise green investment opportunities across the country.*

### 2.4 Activity to Date

Annex One of the report provides a survey of the activity that has been delivered by the Hubs between April 2018 and March 2020.

Local Energy Hubs are supporting **183** shortlisted local energy projects (including 18 aggregated projects) with an estimated value of **£850 million**. Local Energy Hubs have also identified a longlist of **517** projects, that the programme and the project sponsors do not have the capacity to adequately support. The longlist, along with continuing emerging projects,

gives reassurance that any attrition from the shortlist pipeline can be addressed. To develop and support delivery across this pipeline the Hubs have:

- Identified projects and collaborative opportunities
- Provided project management/ advisory support to shortlisted projects
- Delivered and enabled feasibility studies
- Delivered business cases
- Identified external funding, written funding bids and secured grants
- Undertaken sector research & supported soft market tests
- Undertaken desktop options appraisals
- Developed business case templates
- Used the Hub networks to communicate projects
- Supported procurement of consultants
- Identified barriers and coordinated problem solving to find solutions
- Convened cross sector stakeholder groups to share learning, facilitated workshops
- Commissioned reports and studies to support and accelerate project development
- Provided ERDF Technical Assistance (NW Hub only)

Local Energy Hubs have built up strong relationships with key stakeholders within their areas alongside national organisations. This has enabled the Hubs to promote the energy agenda, and work to minimise silos of work by connecting local stakeholders in different disciplines who are working towards similar goals. Local Energy Hubs have come to be recognised as a valued point of contact for local authority led energy project development and innovation, supporting local knowledge sharing, activity and growth.

### 3. LOCAL ENERGY HUBS & THE UK POLICY CONTEXT

In considering the future role of the Hubs, it is necessary to consider the wider context:

- Alignment with policies for achieving net zero by 2050,
- A green recovery in response to the Covid-19 pandemic
- Challenges for local energy project delivery

#### 3.2 Alignment with net zero policy

It is anticipated that as government develops policy frameworks to respond to the legislation for net zero 2050, there will be several areas in which sub-national agencies will need to scale up activity aligned with the local energy agenda.

The Hubs can play an active role in developing and supporting place-based interventions. They can convene local forums for consultation upon the creation of new policy mechanisms and support the public sector to translate policy into delivery at a local level. The Hubs could deliver technical assistance to support future regional funding programmes and could act as a broker into national funding programmes.

It is anticipated that as government develops policy frameworks for achieving net zero, there will be several areas in which sub-national agencies will need to scale-up activity aligned to the local agenda. Hubs might play a role in supporting place-based interventions. If integrated into program design and supported with appropriate capacity funding they are well placed to contribute to a range of policy objectives, including:

**Climate emergencies:** A significant majority of LAs have declared climate emergencies. This creates political buy-in for the public estate to lead by example. Hubs can support councils to include viable capital investment proposals within the action plans that are now in preparation.

**Home energy efficiency:** The Hubs can promote the Future Homes Standard for large new-build estates and the electrification of heat in buildings more generally. They can help share best practice approaches to whole place retrofit and identify sources of funding.

**Technical Assistance** Hubs have played a role in promoting ERDF, explicitly in the North West where the Hub has taken an ERDF-funded Technical Assistance role, liaising with MHCLG on a ERDF Low Carbon Transition project pipeline. As part of the design of future funding programmes such as the Shared Prosperity Fund, Hubs could contribute by providing energy sector expertise as technical assistance, helping to promote or provide due diligence.

**Local Area Energy Plans:** In future, the energy networks and local public agencies will need to come together to share data to ensure that investment in infrastructure aligns with local and national and local decarbonisation plans. Hubs can support this using their combination of technical expertise, understanding of national policy and knowledge of the local challenges and priorities. There is also software being developed that would assist with this, the Hubs can facilitate strategic plans and utilise a local to regional level approach.

**Brokering to other funding:** The Hubs have demonstrated that they can successfully signpost and support public sector applications to government funding for energy investment, including SALIX, HNDU and Industrial Heat Recovery Fund grants. The Hubs could grow capacity to use their established networks to broker engagement with nationally delivered programmes.

**Industrial Decarbonisation:** The Hubs can support LEPs to design support programmes by sharing best practice. They can consider strategic infrastructure investment to unlock industrial decarbonisation as part of their pipeline. They might promote the Clusters Mission and forthcoming Industrial Energy Transformation Funds.

**Transport Decarbonisation:** The Hubs could play an intermediary role supporting local areas to understand best practice on implementing EV charging networks that are integrated with renewable energy generation and storage to reduce the cost of grid reinforcement.

**Energy Transition:** The Hubs are well placed to mobilise local leaders from the public, private and community sectors. They can therefore facilitate stakeholder engagement with energy companies, energy network operators, regulators, government and innovators to develop local energy projects that will meet the challenges in developing the future energy system.

### 3.3 Response to Covid-19 Recovery

There has been widespread discussion that a green recovery could form part of the national response to COVID-19. If recovery funding is used to scale up and accelerate investment in green initiatives, then there will need to be new and adapted funding delivery mechanisms.

The Hubs have already been engaged with BEIS on the opportunities and challenges of scaling-up housing retrofit. There is an evident need for coordination of activity at the regional level if there are to be large scale grant short term funding programmes for fuel poor and social housing sectors.

Other areas in which the regions and local government will require support include adapting and aligning climate emergency planning into recovery planning; considering methods for evaluating energy and climate impacts of fast tracked strategic investment; including local energy projects in medium term project pipelines and adapting existing low carbon financial instruments so that they can support green recovery.

Mechanisms to provide funds to the Hubs and regions through devolved assurance frameworks is already in place. The Hubs may have a role in scaling up project development in support of sub-regional recovery plans. This is considered in Section 5.

### 3.4 Challenges for local energy project delivery

The Hubs were created to overcome challenges to sub-regional delivery of energy schemes. Three challenges for future delivery are highlighted below.

#### 3.4.1 Challenge 1 – Sufficient resource to move projects from feasibility to delivery

The Hubs primarily provide staff capacity to project manage and support case making on behalf of project sponsors. This has been demonstrated to move projects from early stage outline proposals to detailed feasibility studies and outline business cases.

As the Hubs' project pipeline matures and projects progress to full business case and commercialisation, project development costs are incurred. Resources are required to undertake detailed technical feasibility, financial modelling, and to obtain legal advice. Late stage projects require funding for planning and due diligence. A capital pipeline of over £850

million entails significant project development budgets. Project revenue costs are typically 10% of capital costs depending on project complexity.

The Hubs have supported project sponsors to commit budget to technical feasibility and evidence reports. Some funding has been retained by some Hubs to call-off for technical, legal and commercial expertise. However, budgets for project development are not always available within LEPs or other project sponsors. The Heat Network Delivery Unit (HNDU) and Leeds Energy Accelerator funds are examples of dedicated support for project development, provided at risk and to be matched with project sponsors' own resources.

### **3.4.2 Challenge 2 – Staff resources to develop projects at scale**

There is strong demand for the strategic and enabling activity provided by the Hubs. The knowledge and networks that are being developed by the Hubs create additionality by helping local organisations to quickly test if projects may be viable; to help identify potential funding sources; to identify potential delivery partners. The Hubs have received a range of positive feedback from public and private sector organisations.

The Hubs are funded on an annual basis. This has resulted in short term contracts of employment and creates a risk associated with recruiting and retaining highly qualified individuals with the ability to develop and deliver the scale of energy projects identified. In addition, whilst the Hubs provide much needed additional capacity, LEPs and local authorities often have limited capacity to develop projects, including an aversion to self-finance project development. Therefore, the wider eco-system in which the Hubs operate is fragmented and challenging to deliver large scale projects

### **3.3.3. Challenge 3 – Capital funding and engagement with the private finance market**

The Hubs have identified a project pipeline worth £850 million with the potential to be delivered within the next four years. For these projects to be realised capital investment will be needed. Finance is available from private sector providers for the most commercial schemes. However, it is recognised that the Hubs and government have an additional role to support packaging smaller and less commercial projects, so they are of a scale to attract private investment. Hubs can work within their geography and beyond to promote the national pipeline of projects, broker conversations with financiers and support the development of financial instruments.

While private finance is available it is unclear where the public finance will appear. The 2020 Autumn Budget may provide additional devolved local growth funds. The Shared Prosperity Fund is a potential source of public finance into energy projects after 2023. The delivery mechanism for this fund should take account of the Hubs, the capacity of the Hubs to administer public funds, and provide technical assistance to energy projects.

National interventions to stimulate action often have a place-based element. If capacity were expanded, the Hubs could scale up local brokerage for schemes including SALIX, HNIP and innovation funding for energy transformation funds.

Furthermore, many projects require a number of funding routes in order to deliver the project. Whilst in many cases clear project funding routes are yet to be developed, the need for expertise, resource and government support to deliver projects is clear. To deliver a significant number and range of projects, there is a requirement for a clearly understood funding and subsidy framework for all project types.

## 4. OPTIONS APPRAISAL FOR FINANCING THE LOCAL ENERGY HUBS

### 4.1. Delivery Model Options

To address the challenges and assess the potential for self-financing, this section details the evaluation carried out on a range of potential delivery models. These models have been assessed in the context of strengths, weaknesses, opportunities, and threats.

#### 4.1.1. Delivery model 0 – End Hub Programme

Overview of the model: The programme ends in October 2021 as currently budgeted. There is no further government support to the Hubs via the Local Energy Programme.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Cost savings to government if programme not replaced with alternative</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>Under investment in local energy opportunities that have been identified</li> <li>No further progress is made in identifying local energy projects</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Fund local energy projects through alternative such as a centralised model</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Lack of capacity in LEP areas to develop and deliver local energy projects</li> </ul>

Recommendation: This option is not recommended.

#### 4.1.2. Delivery model 1 – Business as Usual

Overview of the model: To continue to fund the Hubs year on year at the same level.

Rationale: the Hubs have developed a strong pipeline of 183 shortlisted projects with a capital value of £850m and provided added strategic value across the country.

Reference example: Local Energy Hubs.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Continue to provide support to develop energy projects</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>Does not address the project development funding challenge</li> <li>Continued funding from BEIS required</li> <li>Short term funding leads to recruitment and retention problems</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Maintain current delivery levels.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Capital finance unavailable to deliver projects developed by the Energy Hub</li> </ul>

Recommendation: This option is not recommended.

#### 4.1.3. Delivery model 2 – Business as Usual with 4-year funding agreement

Overview of the model: the Hubs are funded at the same level as currently but with a four-year funding agreement.

Rationale: The Hubs currently have a yearly funding settlement with no funding agreed post March 2021. The yearly funding settlement causes problems recruiting and retaining skilled staff and means the Energy Hub does not have the longevity or stability to develop projects, which may take a number of years to develop.

Reference example: European Regional Development Fund (ERDF) Technical Assistance.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Provides project development certainty</li> <li>▪ Embeds the role of the Hubs within LEP and Local Authority landscape as a source of resource</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Requires additional resource from BEIS which may not align with BEIS funding cycles</li> <li>▪ Reduces the opportunity to become self-financing</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Ability to recruit and retain highly skilled teams</li> <li>▪ Delivery of more projects including those with a longer development cycle</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Change of government or policy which may change the role of LEPs</li> </ul>

Recommendation: Recommended

#### 4.1.4. Delivery model 3 – Enhance Core team

Overview of the model: Hub funding is increased to support additional staff to provide additional capacity and in-house expertise to LEPs and local authorities.

Rationale: The Hubs have a shortlist project pipeline with an estimated capital value of over £850 million, the project longlist comprises 517 projects, which the Hubs currently do not have the capacity to develop.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Increases the number of projects being supported through feasibility to financial close</li> <li>▪ Supports later stage project development</li> <li>▪ Commercial, legal and technical experts can help steer early stage projects to increase deliverability</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Increased amount of government funding needed</li> <li>▪ Later stage project development can be supported through external consultants</li> <li>▪ Number of projects at an advanced stage may not justify the roles</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Accelerate the pace and number of projects developed to help achieve net zero goals</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Change of policy on LEP or Combined Authority role.</li> </ul>

**Recommendation:** This model is recommended, with each Hub left to identify how to best allocate additional capacity to suit the local context.

#### 4.1.5. Delivery model 4 - Development funding model

Overview of the model: Provision of development funding for the Hubs to assist project development, including technical, financial and legal advice, project management support and facilitating links with the finance market. This model would require core funding by BEIS to Hubs to be retained.

Rationale: Where established funding routes exist, such as with HNDU and the Heat Network Investment Project (HNIP), projects are more numerous and are developed more quickly. Where these funding models do not exist, projects stall. Early stage project development entails the highest risk of funding projects and investors are reluctant to fund at this stage. Public funding is required to help de-risk projects for investment readiness. Increased and accelerated project delivery through Hub development funds would support a clean growth post Covid-19 recovery.

Reference example: HNDU provides development funding to create a pipeline of district energy projects that can unlock the capital investment required. HNDU has deployed £20m of development funding since 2013 and via an eleven-person team comprised of engineering, project development and finance/commercial specialists in this sector

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Utilises the existing capability of Hubs to manage grant programmes</li> <li>▪ Augments existing project development capability with funding availability</li> <li>▪ Provides dedicated, clear and consistent project development funding which is currently lacking</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Requires additional resource from government</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Acceleration of delivery of the project pipeline</li> <li>▪ Provide a pipeline of local authority endorsed energy projects that LEPs have supported to investment readiness, that could be funded through devolved budgets to individual LEP areas</li> <li>▪ Support post Covid-19 economic and supply chain recovery</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Capital finance is not available to deliver the projects developed through this route</li> </ul>

**Recommendation:** The model is recommended.

#### 4.1.6. Delivery model 5 – Optimal Model Net Zero: Post Covid-19 Economic Recovery

Overview of the model: Provision of scaled activity to meet net zero 2050. This would require an enhanced core team to drive place based strategic planning, engaging key stakeholders and national bodies to enable energy transition at pace. Development funds and grants to take projects from feasibility to financial close would need to be increased proportionality and aligned with the level of ambition for delivery. Multi-vector place-based local energy projects would benefit from increased efficiency in development and delivery and align with net zero policy. The Hubs can be flexible and upscale staff capacity within the Hub, potentially the

LEPs would need to be enhanced, development funding would need to be proportionate and public sector capital grants may be required to attract private sector investment.

Rationale: Delivery model 3 and 4 reflect an increase in funding and delivery capacity for the Energy Hubs based on current project longlists and an understanding what is needed to accelerate delivery. For the UK to meet its 2050 zero carbon target the level of activity needs to increase significantly across the country. Hub delivery could be scaled up further, with increased staff capacity, development funds and community grants to match the scale required to meet the 2050 target.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Utilises the existing capability of Hubs to manage grant programmes</li> <li>▪ Augments existing project development capability with funding availability</li> <li>▪ Provides dedicated, clear and consistent project development funding which is currently lacking</li> <li>▪ Provides opportunity for scale, replication, acceleration and place based strategic interventions</li> <li>▪ Efficiencies of scale sustainable development of local supply chains</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Requires additional resource from government</li> <li>▪ Later stage project development can be supported through external consultants</li> <li>▪ Number of projects at an advanced stage may not justify the roles</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Acceleration of delivery of the project pipeline</li> <li>▪ Provide a pipeline of local authority endorsed energy projects that LEPs have supported to investment readiness, that could be funded through devolved budgets to individual LEP areas</li> <li>▪ Support post Covid-19 economic and supply chain recovery</li> <li>▪ Enables long term stability and confidence in delivery in the public and private sector</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ That the capital finance is not available to deliver the projects developed through this route</li> <li>▪ Change of policy on LEP or Combined Authority role.</li> </ul>

**Recommendation:** The model is recommended.

#### 4.1.7. Delivery model 6 - Equity model

Overview of the model: The Hubs are set up as an arm's length organisation with capital funding. The Hubs use this funding to develop and invest in projects, particularly high risk/early stage projects. The dividends or loan repayments are recycled into new projects and used to fund Hub operations; operational projects can be sold.

Rationale: High risk and early stage projects find it challenging to raise project development and capital financing. Provides a mechanism to move away from BEIS core funding.

Reference example: Leapfrog Finance.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Moves away from government funding</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Requires additional capital financing</li> <li>▪ Requires the Hubs to have the skills and capability to make investments</li> <li>▪ Additional risk on host LEPs</li> <li>▪ Would require funding to be on commercial terms to avoid state aid</li> <li>▪ Business model may require BEIS finance until model to become self-financing</li> <li>▪ Potential for default</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ To increase capital finance in the market</li> <li>▪ Joint venture opportunities to increase investment</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Displacing existing finance markets</li> </ul>

**Recommendation:** This model is not recommended due to the risks of delivery and the lack of capacity within the Hubs to deliver this model.

#### 4.1.8. Delivery model 7 - Low interest loan model

Overview of the model: Provide low interest loans to projects during the development and delivery phases, the interest repayments fund the administration of the Hub.

Rationale: allows the Hub to move from government funding and provide a source of development finance.

Reference example: Salix.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Move away from BEIS funding</li> <li>▪ Provision of project development funding</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Requires government capital funding until self-financing</li> <li>▪ Already existing low interest finance available such as Salix, PWLB, Abundance Municipal loan/Bond, Pure Leapfrog, Triodos, Co-operative Bank</li> <li>▪ Even low interest rates are likely to be unattractive for early stage projects</li> <li>▪ Depends on success in supporting projects which would not otherwise be supported by Salix, Leapfrog etc.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Enabling projects with strong business case but lower IRR to progress</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Displaces existing finance markets</li> </ul>

**Recommendation:** Not recommended due to existing market provision.

#### 4.1.9. Delivery model 8 - Advisory model

Overview of the model: The Hub provides fee-based advice to local authorities, which augments BEIS core funding.

Rationale: Many local authorities have declared climate emergencies but have limited resources to deliver this commitment. Additional resource generated through this route could augment BEIS funding potential reducing the resources required from BEIS.

Reference example: Carbon Trust.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Additional funds available to reduce BEIS requirements</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Existing skills of staff may not match skills required for advisory model</li> <li>▪ Focus on fee services may divert resources from Energy Hub objectives</li> <li>▪ Insurances not currently in place to provide consultancy model</li> <li>▪ Existing consultants within the market provide required services</li> <li>▪ Perception that the Energy Hub is publicly funded but charging for its services, if the local authority is willing to pay then it would have done so anyway in a way which may have added resource to the local authority</li> </ul>
<p><b>Opportunities</b></p>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Providing consultancy service does not increase local authority capacity</li> <li>▪ Concern over ability to pay e.g. if not willing to pay then does this result in the Energy Hub not supporting that local authority</li> </ul>

**Recommendation:** Recommended as an addition opportunity for some Hubs but not to be mandated as a method of funding.

#### 4.1.10. Delivery model 9 - Contract suite e.g. Local Partnerships

Overview of model: The Hub will develop a suite of intellectual property with expertise, predicated on the type of projects coming forward and identified gaps. This IP could be in the form of standardised contract forms, procurement frameworks etc. The key investment is in upfront procurement of contract forms (legal, procurement, customer/technical). Fees are associated with access to contract suite and additional options of providing professional services to accompany access.

Rationale: The role of the Hubs is to develop a series of projects through to delivery. To deliver these projects each project will need to undertake procurement of contractors and access to procurement frameworks and legal documentation could reduce delivery costs.

Reference example: Local Partnerships.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Move away from BEIS funding</li> <li>▪ Provision of project development support to reduce costs</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Funding required to develop contracts and frameworks. Frameworks may not be used if procurement departments are wary of externally procured frameworks</li> <li>▪ Standard contracts and frameworks may not be appropriate to projects</li> </ul>
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<ul style="list-style-type: none"><li>▪ <b>Opportunities</b></li><li>▪ Enables Hubs to self-determine future priorities, beyond government requirements</li></ul>	<ul style="list-style-type: none"><li>▪ <b>Threats</b></li><li>▪ Lack of take up of contract suite</li></ul>
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**Recommendation:** Recommended for further analysis during 2021.

## 5. LOCAL ENERGY HUBS PREFERRED OPTIONS

### 5.1. Preferred Delivery Model and Scaling Up

In the context of meeting the net zero Target, BEIS asked the Hubs to consider what funding model would allow them to a) delivering more of the existing project pipeline and b) attain a higher level of delivery based on national potential.

- a) *realising the existing project pipeline*: The preferred option for the Hubs to delivering more of the existing pipeline post October 2021 is to combine both delivery model 3, *Enhance core team*, with delivery model 4, *Development funding model, the enhanced ambition model*. This would enable accelerated delivery of the current shortlist pipeline and additional resource to bring forward the project longlist.
- b) *higher level of delivery based on national potential*: The Hubs would seek to work to delivery model 5, *Net Zero/Post-Covid Recovery, the optimal model*. Achieving net zero will require extensive electrification of heat and transport, significant strengthening of the electricity transmission and distribution networks, energy efficiency retrofit in buildings and homes that are fit for the future. This will require expansion of the current supply chain, with additional roles in AI, data analytics and new roles linked to electric vehicles, hydrogen and carbon capture technology. This model would enable the local energy transition to meet net zero at scale.

### 5.2 Enhanced ambition: Realising the existing project pipeline

The recommended funding model to deliver this is over the course of a four-year spending round, and will require

- **£40m for core funding to provide an enhanced service**
- **£90m for project development funding**
- **£20m for funding of community energy**

#### 5.2.1 Rationale: £40m for core funding to provide an enhanced service

Developed from Local Energy Strategies, the Hubs are currently working on a shortlist of **183** projects with a value of **£850million**. The current longlist of projects across the Hubs amounts to **517** projects. While these have not been fully costed, we have estimated the total value to be of the order of **£1.8billion**. The project short and longlists are dynamic and are consistently growing. We would expect accelerated growth in the numbers of projects in the pipeline as technologies become more embedded, working examples of projects encourage other similar projects, and financial models become streamlined and standardised.

At present, Hubs are supported through core funding of £8.45 million over three years, and £10 million Rural Community Energy Fund (RCEF) funding over two years. The Hubs believe there is a clear case to increase the core offer of funding to £40 million. Currently, due to lack of resources, projects are slow to develop. By increasing Hub staffing levels to at least one staff member per LEP supported by 2-3 core staff per Hub, resources would be more realistically aligned with the scale and complexity of the project pipeline. This increase in resource would allow a far greater degree of specialism in the technologies being delivered within the Hub team, as well as the legal, finance and procurement support that are critical to the successful delivery of the pipeline. Hubs would be able to offer the appropriate salaries to secure the experienced staff required to deliver the complex projects on the pipeline. Staff

teams could be developed around local needs, with a combination of core staff, to ensure learning is maintained with the Hubs themselves, and external specialists, brought in as and when they have greatest impact.

### **5.2.2 Rationale: £90m for project development funding**

While an increase in the core offer would be critical in resourcing the staff team to deliver the pipeline, it would not in itself be sufficient. Currently, 50% of the shortlisted projects in the pipeline are at either pre-feasibility or options appraisal stage, with 50% at business case or beyond. This demonstrates the potential for the Hubs in identifying and moving projects through early project stages despite the lack of accessible development funding and when resources are spread extremely thin.

It is at the development funding stage where projects are at highest risk and the private sector is least likely to invest, that targeted funding can have the greatest impact in moving projects forward. It is also the stage where a great deal of funding can be used ineffectively, as feasibility work frequently fails to unlock projects, and soon becomes out of date. Through utilising the Hubs expertise, development funding will be an integral key element of a wider development framework focusing clearly on the delivery of a replicable and scalable project pipeline.

Projects have been developed so far through accessing funds such as ERDF and HNDU/HNIP. These funding routes fit a small percentage of projects in the pipeline. HNDU/HNIP has worked well and the result has been a number of heat network projects being identified as expertise develops, despite being a challenging technology to deliver. However, other funding options are frequently hard to access and inflexible in the context of technologies which are often innovative and where expertise is quickly evolving.

£90 million of development funding, in addition to the increase in core funding of £40 million, would not only enable delivery of the current project pipeline at a leverage rate of 7:1 but would also enable access to the skills, knowledge and investment models needed to unlock the £1.8 billion+ longlist. Through utilising LEP experience in developing projects, administering grants and supporting the technical aspects of applications, the Hubs are uniquely placed to couple this expertise with a clear understanding of the challenges that exist in developing and delivering the project pipeline. This would be a key strategic element of the drive to decarbonise the economy, aided by clearly aligned government support and developing adaptable and responsive finance models which could be replicated across the project pipeline. It would also be expected that leverage rates would increase as projects become standardised through repeated delivery. Through fast-tracking these projects, expertise would develop, which could then be shared through the Hub's extensive networks of local authorities and private developers and investors.

The Hubs have already focused efforts on engaging with major investors at the earliest possible stage to ensure projects are shaped in a way to maximise investment potential. Through building on these links and working with the private sector to inform how best to design the available development funding to maximise leverage, we could expect to see a reasonable conversion rate of project proposals into capital investments.

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development framework focusing clearly on the delivery of a replicable and scalable project pipeline.

### **5.2.3 Rationale: £20m for funding of community energy projects**

As communities seek to decarbonise their heating and established technologies such as wind, solar and battery storage continue to come down in price, more opportunities will arise in community energy. Through extending and expanding RCEF, the Hubs will be able to increase support to this sector as project viability increases and investment models are developed. By creating a generic community energy fund, not restricted to rural areas, the impact can be maximised. Whereas in the past community energy focused primarily on wind then solar projects, we are now witnessing a proliferation in the variety of organisations who are looking at developing projects as well as the technologies they are considering. In the current round of RCEF funding, projects involving technologies including anaerobic digestion, micro-heat networks, battery storage, EV charging points and mine water heating have been put forward.

RCEF has gone from a standing start in July 2019 to a situation nine months later where the fund is fully staffed and operational. To March 2020, there have been **494** enquiries, **46** applications and **14** grant awards. The Hubs have demonstrated their ability at setting up and managing the programme. Through their networks they have successfully engaged and supported existing and emerging community groups to apply successfully to the fund. Through a focus on delivery of project pipelines, they are also able to identify areas of synergy with larger-scale projects focusing on similar technologies. The Hubs are also focused on working closely with private and institutional finance to develop scaled investment opportunities, this approach could potentially be extremely valuable in enabling delivery of community energy projects at scale.

An increased community energy offer would enable Hubs to build on the structures and expertise developed through the programme to date and widen the remit beyond a rural focus.

## **5.3 Optimal model – delivering the national potential**

Scaled funding for the Hubs could be considered to respond to the scale of identified opportunity, net zero policy and Covid-19 recovery, as described in Sections 2.2, 3.1, 3.2 respectively and reflecting upon Delivery Model 5 in Section 4. The recommended funding model to deliver this is over the course of a four-year spending round, and will require

- **£80m for core funding to accelerate and upscale local energy deployment**
- **£560m for project development funding**
- **£40m for funding of community energy**

### **5.3.1 Rationale: £80m for core funding to accelerate deployment**

The Government has committed £1billion to public sector decarbonisation and £2billion to drive domestic energy efficiency in this financial year, these are unprecedented scales of funding presenting significant opportunity to drive decarbonisation in the built environment. In advance of understanding Government's policy framework after the Autumn Statement and making the reasonable assumption that project activity could increase by a factor of 5 to deliver a place-based approach to support LEPs green recovery Covid-19 renewal plans and LAs climate emergency plans.

This proposition would seek to shift the Hubs approach from individual projects to decarbonising energy systems in places. It would enable a significant intervention to develop a whole system approach, building on the Innovate UK funded Prospering from the Energy

revolution projects, work of the Catapults and wider innovation ecosystem. The Hubs would also align activity in supporting organisations to be shovel ready for funded schemes such as public sector decarbonisation and continue to work across government departments to deliver policy. This upscaled capacity would enable public sector stakeholders not engaged in local energy to benefit from targeted support to meet net zero.

### 5.3.2 Rationale: £560m for project development funding

If place-based interventions are to respond to an accelerated national delivery programmes as part of a Covid-19 recovery response then there will be a substantially increased demand for project development support of the kind that local energy hubs are seeking to provide. Development funding of this order would enable a whole systems place based approach, enabling the development of replicable and scalable business models that could be accelerated across the Hubs geography.

Research has indicated that at least £300 billion of capital investment is required in decentralised energy infrastructure to meet net zero targets. In the UK100 report, Siemens identified the potential to unlock £100 billion of capital investment in local energy systems by 2030 through partnership approaches. This would require development funding of the order of at least £5 billion for industry and private capital to work with and local authorities to scale up investment initiatives to deliver the transition to net zero.

### 5.3.3 Rationale: £40m for funding of community energy

The proposition is to widen the remit for generic community energy funds as outlined above and to expand the programme to decarbonise third sector organisations. This would enable charities and other organisations providing social benefits that have been impacted by Covid-19 to reduce operational overheads through decarbonising assets and developing projects that could generate revenues to support activities.

## 5.4 Future Management & Governance

A programme that expands core funding with additional grant administration activity would grow the Hubs into sizable organisations managing multi-million pound budgets. There are some factors to consider in the design of such a national programme, to allow local flexibility whilst retaining the need for Hubs to deliver national KPIs and ensure BEIS has adequate oversight of outcomes.

- **National programme support:** The BEIS Local Climate and Energy Team provides programme management support to the Hubs' programmes and hosts local energy online resources. An enlarged programme may require national capacity to be strengthened.
- **Governance:** Energy Hub management boards are comprised of LEP officer representatives accountable to LEP Chairs to ensure oversight of current programmes. There may be a need to strengthen oversight related to grant administration, along with a separation of duties where Hubs perform both the advice and approval functions.
- **Awarding grant funding:** An agreed national framework is in place for the Hubs to demonstrate the logic of allocation of resources to shortlisted projects. A grant funding award process that is designed nationally can be built upon this framework, as well as the experience and lessons learnt from RCEF delivery.
- **Devolution:** The local growth agenda and devolution provide funding for LEP areas and Combined Authorities. A Hub programme operating across boundaries must consider how

LEP areas are ensured appropriate influence over and receive a proportionate share of local energy capacity support. The Hubs are already demonstrating that they can act as an effective bridge across varied political geographies. LEPs have indicated that they are supportive of the Hubs providing technical assistance and project delivery support across LEP areas and wish to see this continue.

- **Additionality:** Capacity within LEP areas and Local Authorities is highly varied. The Hubs should demonstrate that the support they provide is additional to existing provision and does not duplicate or crowd out LEP activity. Projects that scale across multiple geographies should be prioritised.
- **Operational overhead:** Financial accountable bodies hosting a Hub carry an oversight and administrative burden extra to financial management and this should be compensated for in a consistent way across the country.
- **Delivery model:** Some Hubs have passed through or directly funded other organisations to deliver Hub activities, including administering RCEF funds and recruiting staff to LEPs. There should be flexibility for BEIS budgets to be directed by Energy Hub management boards to alternative accountable bodies for specific outcomes.
- **State aid:** Where Hubs provide grant funding, there are state aid considerations. Design of grant programmes so that they are recognised as compliant at the national level as part of the programme would be preferable; or if this not possible, there will need to be national guidance for scheme administrators and applicants.
- **Carbon reduction & KPIs:** The Hubs are currently evaluated in terms of number business cases developed and £s investment in energy schemes. Carbon and energy savings associated with the programme can be reported but thought should be given to where these savings are additional, and where this would be double counting savings from other schemes (such as when a Hub supports a HNDU-funded project).

## ANNEX 1 – ENERGY HUB DELIVERY TO DATE

This section outlines how the Hubs have performed against each of their objectives. An activity summary for each of the Hubs is included in **Annex Four**.

### Objective 1: Increase number, quality & scale of local energy projects delivered

The Hubs are supporting **183** shortlisted local energy projects with an estimated value of **£850 million**, as tabulated here:

Project type	No. Projects	Est. Value (£m)
Renewable Energy Generation (inc. storage)	67	208
Heat led projects	37	255
Energy Efficiency Buildings (public, private & homes)	21	92
EV Transport	15	34
Zero Carbon Developments	13	121
Network Innovation	13	36
Community Renewables	7	14
EV/H2 Infrastructure	3	4
Industrial/Commercial Building Clusters	2	20
Multi vector (power, heat, transport)	2	38
Biogas	1	1
Smart Grid	1	4
Hydrogen	1	14
Industrial Process	1	10
<b>Total</b>	<b>183</b>	<b>851</b>

Shortlisted projects can be delivered between now and 2025. The Hubs have also identified a longlist of **517** projects, that the programme and the project sponsors do not have the capacity to adequately support. The longlist gives reassurance that any attrition from the shortlist pipeline can be addressed.

**Annex Four** includes a full list the shortlisted projects for each Hub along with examples of interventions that have been made to develop the business case.

Representative project examples from across the Hubs include:

- **Midlands:** Silk Bureau Evesham; reducing gas capacity to enable CHP at next stage
- **Midlands:** Warndon Super Socket; sub-station upgrade for large scale solar w/ storage
- **Midlands:** Bowmans Harbour 7MWp Solar Array; powering a hospital
- **NW:** Alderly Park; support public private JV to develop investment case for smart grid and CHP system connected to an ambient temp heating network
- **NW:** Barrow-in-Furness; support for district council with a survey of public estate retrofit options as part of technical assistance ahead of an ERDF application
- **GSE:** Herts IQ; 55Ha commercial and industrial development site, over 16MW renewable energy potential and £11m private sector investment
- **GSE:** Suffolk County Council solar PV; wind, biomass renewable opportunities scoping study on land holdings (58 sites) to deploy £20m investment
- **NEYH:** Newcastle Airport; solar PV and battery storage

- **NEYH:** Tees Valley; support RSL with planning issues relating to air-source heat pumps
- **SW:** Cornwall Council; supporting £17m, 20MW programme of solar across council buildings and estate
- **SW:** Southampton Public Sector Retrofit; supporting the council to develop a £25m business case to upgrade the energy efficiency of its estate

## **Objective 2 - Raise local awareness of opportunity for and benefits of local energy investment**

The Hubs have been directed by LEPs governing their operation to play a broader role in addition to project pipeline development support.

The Hubs were in place to promote the use of LEP Energy Strategies as key reference documents in the preparation of LEPs Local Industrial Strategies.

The Hubs have built up strong relationships with key stakeholders within their areas alongside national organisations. This has enabled the Hubs to promote the energy agenda, and work to minimise silos of work by connecting local stakeholders in different disciplines who are working towards similar goals. The Hubs have come to be recognised as a valued point of contact for local authority led energy project development and innovation, supporting local knowledge sharing, activity and growth.

The Hubs promoted and delivered a series of Green Finance events jointly with UK100. They facilitated EV Roadshow events in 2018 and 2019. Each Hub has convened local events and workshops to address local appetite and demand. Capacity provided by the NEYH Hub supported delivery of the Northern Powerhouse Energy & Clean Growth Conference, published in conjunction with the NP11 Energy & Clean Growth Report for which the NEYH and North West Hubs coordinated evidence gathering.

Energy Hubs have established local networks of contacts with government agencies. This has enabled them to signpost government policy and funding opportunities. Newsletters communicate the work of the Hubs and support knowledge exchange. The Hubs have developed toolkits and business case templates which have been shared across all Hubs.

The Hubs have promoted the BEIS funded SCATTER tool that models carbon baselines and future trajectories for local authorities, Hubs have also facilitated workshops on climate emergency actions plans with councils, counties and the NHS Trusts.

## **Objective 3 - Enable local areas to attract private and/or public finance for energy projects**

The Hubs have actively supported **27** capital bids with an estimated value of **£84** million and **59** feasibility funding bids with an estimated value of **£99** million. The project shortlist pipeline of **£850** million includes an estimated **£570** million of private sector investment that could potentially be unlocked.

The Hubs have been successful in supporting organisations to access national and local funding for low carbon projects including match funding from ERDF, Industrial Heat Recovery, Local Growth Funds, Heat Network Investment Programme (HNIP) and Innovate UK. Funding support has been matched by both public sector and private sector organisations.

From June 2019, the Hubs are administering the £10 million Rural Community Energy Fund provided by BEIS. The Rural Community Energy Fund (RCEF) has been made available to

enable rural communities to take ownership of the energy challenges facing them. To date there have been **494** enquiries, **46** applications and **14** grant awards.

The growing uptake of RCEF through the work of the Hubs has demonstrated the value of devolving budgets to the Hubs as a delivery mechanism. The Hubs swiftly developed application forms, assessment criteria and processes, legal agreements, and marketing. The first round of grant funding was awarded to community groups within six months of initial funding from BEIS.

## **ANNEX 2 – THE FIVE LOCAL ENERGY HUBS**