Collaborative Working on Energy

1. Purpose

The purpose of this note is to brief the LEP Finance and Resources meeting on the Joint LEP Energy Strategy which has been developed as a collaborative piece of work between Cornwall and Isles of Scilly, Dorset and HotSW LEPs. This work was funded from the BEIS Local Energy Programme[1] which was established to support the development of LEP energy strategies and to provide resources to establish regional Energy Capacity Hubs. The support for LEP energy strategies and creation of regional energy Capacity Hubs reflects the Government's ambition for clean growth and affordable energy whilst meeting national carbon emissions targets.

The work programmes and priorities of the Energy Capacity Hubs will be informed by their local LEP energy strategies. For the HotSW LEP, the Joint LEP Energy Strategy will also inform the development of Productivity Opportunity Plans and be part of the context for the Local Industrial Strategy.

The discussion at the F&R meeting on the proposed response to the recommendations that are made in the strategy will be used to inform a paper setting out the proposed "direction of travel" to be taken to the LEP Board at the end of January.

2. National Clean Growth and Industrial Strategies

Government launched the Clean Growth Strategy[2] in October 2017 with the aim being to achieve economic growth whilst cutting greenhouse gas emissions. In so doing, the Government's objective is to meet the legally binding target to reduce emissions by at least 80% by 2050, as set out in the 2008 Climate Change Act[3].

The Clean Growth Strategy included the following key proposals and policies (for full detail under each heading see Appendix):

- Accelerating Clean Growth
- Improving Business and Industry Efficiency – 25% of UK Emissions
- Improving Our Homes – 13% of UK Emissions
- Accelerating the Shift to Low Carbon transport – 24% of UK Emissions
- Delivering Clean, Smart, Flexible Power – 21% of UK Emissions
- Enhancing the Benefits and Value of Our Natural Resources – 15% of UK Emissions
- Leading in the Public Sector – 2% of UK Emissions
- Government Leadership in Driving Clean growth

The achievement of clean growth, while ensuring an affordable energy supply for businesses and consumers, is central to the UK's Industrial Strategy[4]. On energy specifically, the Industrial Strategy highlighted the following key themes:

- Upgrading energy infrastructure to enable growth

[1] http://www.apse.org.uk/apse/assets/File/Day%201%20-%20Session%201_2%20-%20Patrick%20Allcorn.pdf
[2] https://www.gov.uk/government/publications/clean-growth-strategy
[3] https://www.legislation.gov.uk/ukpga/2008/27/contents
[4] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

- Building the energy infrastructure needed for new technologies
- Delivering affordable energy and keeping energy costs down for businesses
- Delivering clean growth and securing the economic benefits of the transition to a low carbon economy
- Investing in science, research and innovation, including energy storage and grid technologies
- Supporting businesses to start and grow

Overall, the aims of these strategies are to increase productivity, create jobs and boost earnings whilst protecting the climate and environment.

In response the HotSW LEP welcomed the ambition to support productivity growth based on local strengths, including natural capital assets, whilst emphasising that the achievement of the Government's clean growth ambitions would necessarily entail significant investment in resilient energy, transport and digital connectivity infrastructures across the region.

3. BEIS Local Energy Programme

To facilitate the achievement of the Industrial and Clean Strategy goals and drive increased investment in local energy, the BEIS Local Energy Programme was designed to support the development of energy strategies and to build local capacity.

Energy Strategy Support for Local Enterprise Partnerships

In March 2017 LEPs were invited to apply for funding to develop energy strategies or to develop the evidence base for their area. The required outcomes of this work were identified as (but not limited to): a clear analysis of the energy opportunities and challenges; the identification of energy and low carbon priorities; an action plan and funding options to deliver low carbon energy projects.

Cornwall and Scilly Islands (CIoS), Dorset and Heart of the SW LEPs submitted a successful joint proposal to BEIS for an award of £100,000 to fund the development of an Energy Strategy for the South West.

4. Joint CIoS, Dorset and HotSW LEP Energy Strategy

The aim of this work was to develop a coherent strategic framework across the South West peninsula with the actions identified focused around the themes identified in the Government's Industrial Strategy i.e. transitioning to a low carbon economy; delivering affordable energy; supporting businesses to grow and delivering clean growth.

Work with the supplier on the project started in September 2017 and the following approach was adopted:

- Baseline review of existing published material
- Stakeholder engagement including 6 workshops across the three LEP areas and interviews with key players
- Energy System Modelling Environment (ESME) modelling driven by least cost achievement of the UK's national carbon target obligations

- Economic opportunity assessment
- Throughout the strategy development, stakeholders were encouraged to submit LEP energy project ideas. These projects have been collated into a database to inform the strategy and for the LEPs to manage going forwards.

In response to stakeholder workshop feedback, the project was extended to include an additional round of consultation on the draft strategy and delivery plan in the form of a structured questionnaire, with those who signed up for the workshops. The draft strategy and proposed responses to the stakeholder feedback was also discussed by an Expert Panel made up of senior stakeholders.

Lessons from Joint Approach

Benefits

- Strong working relationships have been established between the LEPs on the energy theme.
- A shared view has been developed of the "direction of travel" for energy, including the identification of key opportunities (e.g. the potential for greater use of renewable energy sources) and barriers (e.g. the need to address electricity grid infrastructure constraints).
- Collaborative working on the strategy will inform a joined-up approach to inform the priorities of the SW Capacity Hub
- The visibility of and potential to learn from energy initiatives being worked on in the other LEPs (e.g. geothermal resources in Cornwall) has been opened up.

Challenges

- The work has challenged the role of the LEPs, particularly around:
  - the availability of relevant expertise within the LEPs
  - engagement with all stakeholders, particularly community groups
  - possible influence of remit to drive productivity growth rather than promote low carbon energy projects/carbon abatement *per se*.
- The consultancy task was challenging to achieve given its depth and breadth. Anecdotally we are aware that other LEPs have also found this work to be difficult.
- The methodology used by the Supplier was challenged (specifically the "top-down" scenario modelling based on a national model to achieve UK carbon emission targets) highlighting that different approaches could be used (this has been picked up in the draft strategy document).

Energy Strategy Summary

Vision

The strategy includes a shared vision for energy across the region:

We will create an energy future that is low carbon and more affordable, maximising and retaining benefits in the region.

High Level Findings

- Some of the best renewable energy resources in the UK are contained within the South West.
- The region is not benefiting from these resources and imports almost all (88%) of its energy, spending £9 billion in the process.

- The transformation of the national energy system represents a unique opportunity for the south west due to the region's abundant renewable energy resources and can broadly be summarised by the four points below:
  - **Electricity**: The South West has the potential to be self-sufficient or even a net exporter of electricity by 2030.
  - **Transport**: A rapid increase in electric vehicles over the next two decades with the potential for a longer-term transition to a hydrogen economy.
  - **Heat**: An opportunity to tackle energy inequalities with more efficient buildings; deployment of heat pumps and heat networks.
  - **Infrastructure**: Investment into bigger and smarter transmission and distribution grids to unlock the above.

Realising the transformation outlined above represents a significant challenge and opportunity which could leverage capital investment of over £100bn by 2030 and over £275bn by 2050. This could generate a maximum potential Gross Value Added (GVA) of over £10bn by 2030 and over £25bn by 2050, supporting up to 175,000 jobs by 2030, and up to 450,000 jobs by 2050.

Strategy Recommendations

- The LEPs should make energy a strategic priority
- The LEPs have important roles to play to overcome barriers including leadership and influence, fund administration and knowledge sharing
- Each LEP should have an energy champion
- New governance structures are required
- A dedicated energy lead should be resourced in each LEP

Delivery Plan Recommendations and Funding

Informed by the findings and recommendations from the strategy, the Delivery Plan will be developed separately from the strategy document by the LEPs and will be a living document. The strategy document recommends the following actions to realise the strategy.

A five step Delivery Plan:

- Assess and map existing activity
- Identify opportunities
- Engage with wider stakeholders
- Plan of activity with resources required
- Implementation and monitoring

Funding Strategy:

- To develop and implement funding solutions a database of different funding sources and financing options available should be made available on the LEP websites.

Secure dedicated Energy Resource:

- The LEPs should provide a dedicated energy lead in each LEP. At the moment, resource is spread across multiple areas and does not necessary have a background/expertise in energy.

Work closely with the SW Hub and Bristol Project Delivery Unit:

- To identify delivery support and inform the strategic priorities of the SW Capacity Hub going forward.

Next Steps

The implementation of the Energy Strategy recommendations now need to be considered. This will include the development of the Delivery Plan to take the work forward. However, key conclusions at this stage are:

- A Champion on the HotSW LEP Board will be invaluable
- Joint working between the LEPs will be important
- Effective engagement with the SW Energy Capacity Hub will be essential particularly as the Hub will provide a source of energy sector expertise
- The HotSW Place team will provide the capacity to take the energy strategy work forward

5. Local Energy Capacity Hubs

In 2018 BEIS provided £4.8million of funding to establish five local energy hubs across England. The Hubs are intended to be the interface between central government and regional actors, employing staff within the hub and across the regional geography. This coordination and capacity support will include the maintenance and management of a database of energy projects across each region.

The South West Hub covers the geography of the seven SW LEPs:

- Cornwall and the Isles of Scilly LEP
- Dorset LEP
- GFirst LEP
- Heart of the South West LEP
- Solent LEP
- Swindon & Wiltshire LEP
- West of England LEP

The South West Hub has been allocated approximately £1.0m and is hosted in Bristol by West of England Combined Authority who act as the accountable body. A manager for the Hub was appointed in September 2018 and the next steps are to make three further appointments who will act as a shared resource across the Hub's region. One of these appointments will be shared between HotSW, CIoS and Dorset. Priority actions are now to:

- Develop partnership arrangements with the SW LEPs
- Liaise with BEIS and the SW Partnership on governance structure
- Develop working relationships with each of the SW LEP Energy Strategy Leads
- Identify priorities from SW LEPs' emerging energy strategies
- Identify the key specialist roles required to support delivery of priorities

The trawl and collation of information on energy investment projects across the region is now underway and will be an ongoing activity. For HotSW, the stakeholders consulted were Tier 1

Authorities, Universities and HotSW clusters for Nuclear and Marine. There are approximately 40 projects listed for the HotSW area at various stages of development and not all are looking for Hub support. The list of projects will be reviewed by the Hub with a view to identifying where Hub support could be used most effectively.

Dr Rob Hensley
SCC/Place Leadership Group Secretariat

Key Policies and Proposals in the Strategy

Accelerating Clean Growth

1. Develop world leading **Green Finance** capabilities, including by:
   - Setting up a **Green Finance Taskforce** to provide recommendations for delivery of the public and private investment we need to meet our carbon budgets and maximise the UK's share of the global green finance market
   - Working with the British Standards Institution to develop a set of **voluntary green and sustainable finance management standards**
   - Providing up to £20 million to support a new **clean technology early stage investment fund**
   - Working with mortgage lenders to develop **green mortgage** products that take account of the lower lending risk and enhanced repayment associated with more energy efficient properties

Improving Business and Industry Efficiency – 25% of UK Emissions

2. Develop a package of measures to **support businesses to improve their energy productivity**, by at least 20 per cent by 2030, including by:
   - Following the outcome of the independent review of Building Regulations and fire safety, and subject to its conclusions, we intend to consult on **improving the energy efficiency of new and existing commercial buildings**
   - Consulting on raising minimum standards of energy efficiency for **rented commercial buildings**
   - Exploring how **voluntary building standards** can support improvements in the energy efficiency performance of business buildings, and how we can improve the provision of information and advice on energy efficiency to SMEs
   - Simplifying the requirements for businesses to **measure and report on energy use**, to help them identify where they can cut bills
3. Establish an **Industrial Energy Efficiency scheme** to help large companies install measures to cut their energy use and bills
4. Publish **joint industrial decarbonisation and energy efficiency action plans** with seven of the most energy intensive industrial sectors
5. Demonstrate **international leadership in carbon capture usage and storage (CCUS),** by collaborating with our global partners and investing up to £100 million in leading edge CCUS and industrial innovation to drive down costs
6. Work in partnership with industry, through a new CCUS Council, to put us on a path to meet our ambition of having the option of **deploying CCUS at scale in the UK,** and to maximise its industrial opportunity

7. Develop our strategic approach to **greenhouse gas removal technologies,** building on the Government's programme of research and development and addressing the barriers to their long term deployment
8. Phase out the installation of high carbon forms of fossil fuel heating in new and existing businesses **off the gas grid** during the 2020s, starting with new build
9. Support the **recycling of heat** produced in industrial processes, to reduce business energy bills and benefit local communities
10. **Innovation:**
    - Invest around £162 million of public funds in research and innovation in **Energy, Resource and Process efficiency**, including up to £20 million to encourage switching to lower carbon fuels
    - Support innovative energy technologies and processes with £14 million of further investment through the **Energy Entrepreneurs Fund**

Improving Our Homes – 13% of UK Emissions

Improving the energy efficiency of our homes

11. Support around £3.6 billion of investment to **upgrade around a million homes** through the Energy Company Obligation (ECO), and extend support for home energy efficiency improvements until 2028 at the current level of ECO funding
12. We want all fuel poor homes to be upgraded to Energy Performance Certificate (EPC) Band C by 2030 and our **aspiration is for as many homes as possible to be EPC Band C by 2035** where practical, cost-effective and affordable
13. Develop a long term trajectory to improve the **energy performance standards of privately-rented homes**, with the aim of upgrading as many as possible to EPC Band C by 2030 where practical, cost-effective and affordable
14. Consult on how **social housing** can meet similar standards over this period
15. Following the outcome of the independent review of Building Regulations and fire safety, and subject to its conclusions, we intend to consult on **strengthening energy performance standards for new and existing homes** under Building Regulations, including futureproofing new homes for low carbon heating systems
16. Offer all households the opportunity to have a **smart meter** to help them save energy by the end of 2020

Rolling out low carbon heating

17. Build and extend **heat networks** across the country, underpinned with public funding (allocated in the Spending Review 2015) out to 2021
18. Phase out the installation of high carbon fossil fuel heating in new and existing **homes currently off the gas grid** during the 2020s, starting with new homes

Rolling out low carbon heating (continued)

19. **Improve standards** on the 1.2 million **new boilers** installed every year in England and require installations of control devices to help people save energy

20. Invest in **low carbon heating** by reforming the **Renewable Heat Incentive**, spending £4.5 billion to support innovative low carbon heat technologies in homes and businesses between 2016 and 2021

21. **Innovation:** Invest around £184 million of public funds, including two new £10 million innovation programmes to develop new energy efficiency and heating technologies to enable lower cost low carbon homes

Accelerating the Shift to Low Carbon Transport – 24% of UK Emissions

22. **End the sale** of new conventional petrol and diesel cars and vans by 2040

23. Spend £1 billion supporting the take-up of **ultra low emission vehicles (ULEV)**, including helping consumers to overcome the upfront cost of an electric car

24. Develop one of the best electric vehicle charging networks in the world by:

    - Investing an additional £80 million, alongside £15 million from Highways England, to support **charging infrastructure deployment**
    - Taking new powers under the **Automated and Electric Vehicles Bill**, allowing the Government to set requirements for the provision of charging points

25. Accelerate the uptake of low emission **taxis and buses** by:

    - Providing £50 million for the **Plug-in Taxi programme**, which gives taxi drivers up to £7,500 off the purchase price of a new ULEV taxi, alongside £14 million to support 10 local areas to deliver dedicated charge points for taxis
    - Providing £100 million for a national programme of **support for retrofitting and new low emission buses** in England and Wales

26. Work with industry as they develop an **Automotive Sector Deal** to accelerate the transition to zero emission vehicles

27. Announce plans for the **public sector** to lead the way in transitioning to zero emissions vehicles

28. Invest £1.2 billion **to make cycling and walking** the natural choice for shorter journeys

29. Work to enable cost-effective options for shifting more freight from **road to rail**, including using low emission rail freight for deliveries into urban areas, with zero emission last mile deliveries

30. Position the UK at the forefront of research, development and demonstration of **Connected and Autonomous Vehicle technologies**, including through the establishment of the Centre for Connected and Autonomous Vehicles and investment of over £250 million, matched by industry

31. **Innovation:** Invest around £841 million of public funds in innovation in low carbon transport technology and fuels including:
    - Ensuring the UK builds on its strengths and leads the world in the design, development and manufacture of **electric batteries through investment of up to £246 million in the Faraday Challenge**
    - Delivering trials of **Heavy Goods Vehicle (HGV) platoons**, which could deliver significant fuel and emissions savings

Delivering Clean, Smart, Flexible Power – 21% of UK Emissions

32. **Reduce power costs for households and businesses by:**
    - Implementing the **smart systems plan**, which will help consumers to use energy more flexibly and could unlock savings of up to £40 billion to 2050
    - Working with Ofgem and National Grid to create a more **independent system operator** to keep bills low through greater competition, coordination and innovation across the system
    - Responding to the forthcoming **independent review into the cost of energy** led by Professor Dieter Helm CBE
    - Publishing a draft bill to require Ofgem to **impose a cap** on standard variable and default tariffs across the whole market
33. **Phase out the use of unabated coal** to produce electricity by 2025
34. Deliver **new nuclear power** through Hinkley Point C and progress discussions with developers to secure a competitive price for future projects in the pipeline
35. Improve the route to market for **renewable technologies** such as offshore wind through:
    - **Up to £557 million for further Pot 2 Contract for Difference auctions**, with the next one planned for spring 2019
    - Working with industry as they develop an ambitious **Sector Deal for offshore wind**, which could result in 10 gigawatts of new capacity, with the opportunity for additional deployment if this is cost effective, built in the 2020s
36. Target a total **carbon price** in the power sector which will give businesses greater clarity on the total price they will pay for each tonne of emissions. Further details on carbon prices for the 2020s will be set out in the Autumn 2017 Budget
37. **Innovation:** Invest around £900 million of public funds, including around:
    - **£265 million** in smart systems to reduce the cost of electricity storage, advance innovative demand response technologies and develop new ways of balancing the grid
    - **£460 million** in nuclear to support work in areas including future nuclear fuels, new nuclear manufacturing techniques, recycling and reprocessing, and advanced reactor design
    - **£177 million** to further reduce the cost of renewables, including innovation in offshore wind turbine blade technology and foundations

Enhancing the Benefits and Value of Our Natural Resources – 15% of UK Emissions

38. As we leave the EU, design a new system of **future agricultural support** to focus on delivering better environmental outcomes, including addressing climate change more directly
39. Establish a **new network of forests** in England including new woodland on farmland, and fund larger-scale woodland and forest creation, in support of our commitment to plant 11 million trees, and increase the amount of **UK timber** used in construction
40. Work towards our ambition for **zero avoidable waste** by 2050, maximising the value we extract from our resources, and minimising the negative environmental and carbon impacts associated with their extraction, use and disposal
41. Publish a new **Resources and Waste Strategy** to make the UK a world leader in terms of competitiveness, resource productivity and resource efficiency
42. Explore new and innovative ways to manage **emissions from landfill**
43. Support **peatland** through a £10 million capital grant scheme for peat restoration
44. **Innovation:** Invest £99 million in innovative technology and research for agri-tech, land use, greenhouse gas removal technologies, waste and resource efficiency

Leading in the Public Sector – 2% of UK Emissions

45. Agree **tighter targets for 2020 for central government** and actions to further reduce greenhouse gas emissions beyond this date
46. Introduce a **voluntary public sector target of a 30 per cent** reduction in carbon emissions by 2020-21 for the wider public sector
47. Provide £255 million of funding for **energy efficiency improvements** in England and help public bodies access sources of funding

Government Leadership in Driving Clean Growth

48. Work with businesses and civil society to introduce a **"Green Great Britain"** week to promote clean growth
49. Reinstate a regular **Clean Growth Inter-Ministerial Group** responsible for monitoring the implementation of this Strategy and driving ambitious clean growth policies
50. Report annually on our performance in delivering GDP growth and reduced emissions through an **"Emissions Intensity Ratio"**