

Greater Brighton Economic Board

Subject:	Sussex Energy Mission		
Date of Meeting:	16 July 2024		
Report of:	Chair, Greater Brighton Officer Programme Board		
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LA(s) affected:	All		

FOR GENERAL RELEASE

1. PURPOSE OF REPORT:

- 1.1 The Greater Brighton Economic Board (“the Board”) was established in 2014 as the governance structure to oversee the Greater Brighton City Region Deal with Government. Over the last decade the principal role of the Board has been to co-ordinate development and investment activity across the City Region, and to help create an environment to nurture sustainable economic growth.
- 1.2 To that end the Board has been successful, as it has helped to secure over £160m in Local Growth Funds (LGF) through several funding rounds between 2014-2019. This funding has supported over 30 projects across the City Region ranging from flood defences in Shoreham and Newhaven, new buildings at the University of Brighton and Chichester College Group, and transport infrastructure improvements in Burgess Hill and Worthing.
- 1.3 However, ten years on from its inception and with the Coast to Capital Local Enterprise Partnership (LEP) recently ceasing to exist as a LEP, there is a strong sense from Board members that there is a pressing need for the Board to fill the strategic void and assume a stronger leadership role across the sub-region. There is also an opportunity for the Board to coalesce around a single point of focus and use its convening powers and influence to drive transformational change across the region.
- 1.4 This is a launch of a mission, an invitation for people to join together to get behind an objective, with a detailed work plan to follow. The Mission Statement at Appendix 1 sets out the ambition that the Board has for the City Region and wider Sussex region to achieve net zero energy status by 2040. Note, this target year is specific to Sussex Energy and partner organisations might have their own targets which will be independent.

2. RECOMMENDATIONS:

- 2.1 That the Board agrees that it will assume a strong leadership and convening role, across Greater Brighton, and wider Sussex region, and to coalesce around a focal ambition.
- 2.2 That the Board agrees that achieving net zero energy status by 2040 will be this overarching aspiration for the region over the next 15 years. Net zero energy status means the total amount of energy used by our community on an annual basis is equal to the amount of zero-carbon energy created within the community.

- 2.3 That the Board members will use their networks and influence to promote the Sussex Energy work and encourage collaboration.
- 2.4 That whilst achieving net zero energy status by 2040 will be the flagship ambition the Board agrees that resource permitting, other current and future strands of important work will continue.
- 2.5 That the Board agrees to set aside £50,000 of initial funding from the 2024/25 budget and also commit at least a further £50,000 in 2025/26.
- 2.6 That as a first step towards achieving this ambition, four working groups be convened which will draw upon expertise from Board members and wider stakeholders and new partners. The groups will cover the following four themes:
 - i. Energy Efficiency & Transition
 - ii. Local Energy Infrastructure
 - iii. Key Proposition Development, Success Measurement & Funding Strategy
 - iv. Developing Jobs & Skills

3. CONTEXT AND BACKGROUND INFORMATION:

- 3.1 The Board has been successful at unlocking investment since its inception in 2014. However, in 2018, there was agreement from Board members that for Greater Brighton to reach its full potential there was a need for the Board to be more ambitious, more strategic and more proactive in terms of its aspiration and the level of associated activity. It was decided that the Board should develop a set of Five-Year Strategic Priorities, which would set the vision for Greater Brighton over the period 2019-2023, and these were agreed in January 2019.
- 3.2 The political and economic context has shifted considerably through the last decade, particularly over the last five years since those Five-Year Priorities were agreed; a once-in-a-lifetime pandemic and the worst cost-of-living crisis in recent memory, against the backdrops of levelling up and a climate emergency, mean the world is a very different place to what it was in 2019. The Board's 2014 inception seems a very long time ago.
- 3.3 It has been known for some time that Local Enterprise Partnerships (LEPs) would cease to exist at 31 March 2024 and that the discharge of LEP functions e.g. Growth Hubs would be transferred over to upper tier local authorities. Discussions with Government around how and where those functions would be hosted has been complicated in this area; the Coast to Capital geography covers the whole of West Sussex, East Surrey and the city of Brighton & Hove. Whilst there has been some delay to the integration of LEP functions, it offers an opportunity for the Board could be well-placed to move into the strategic gap that has been created.
- 3.4 Through the autumn and winter the Board held two informal sessions where, against the context of the LEP ceasing to exist and the current economic and political climate, the strategic direction of the Board was discussed. At the first meeting colleagues from the Department Levelling Up, Housing and Communities (DLUHC) were in attendance. The view from DLUHC was that compared to other

geographies this region did lack strategic leadership, a single clear voice and a clear ambition and that there was an opportunity for a regional body to assume that role. The Sussex Energy ambition will also help define a wider economic vision for the region.

Work Linked to Sussex Energy

- 3.5 The Board's programme of work covers a number of key areas and agreeing ambitious Energy and Water Plans in 2019 were the Board's first step on the path towards sustainability, resilience, security, and transitioning to a low-carbon economy. This was soon followed by adoption of the GB10 Pledges on the environment and since then sustainability has become increasingly prominent through the Board's work. This includes establishing a Greater Brighton Task Force to ensure the city-region's homes and buildings are fit for a zero-carbon future. This work is being overseen by Lewes District Council, and the research study led by the University of Brighton.
- 3.6 Worthing Borough Council have recently unveiled an ambitious £500 million project to decarbonise heating across the entire town by 2050. Partnering with Hemiko, who will finance, execute, and manage a district heat network. This initiative is projected to reduce heating emissions by around 90%. The initial phases of the project will focus on connecting large public sector buildings, estimated to save over 3,000 tonnes of annual CO₂ emissions and create approximately 40 local jobs.
- 3.7 Hemiko have also been working alongside Crawley Borough Council to provide operation and maintenance services to Crawley's first district heat network. In its first phase, which is now complete, the heat network supplies heat and hot water to 130 residential units, the new Town Hall, and The Create Building. It will also serve the proposed residential development on the former Town Hall site. The carbon savings are equivalent to removing over 260,000 driving miles from the road each year.
- 3.8 Hydrogen Sussex, born out of the Greater Brighton Infrastructure Panel in 2021, is the body supporting and facilitating the hydrogen economy across Sussex. Hydrogen Sussex quickly built a significant network of key stakeholders across local and central government and the private sector and has been engaging other stakeholders including regional MPs to enhance support and understanding of the region's hydrogen ambitions. Hydrogen Sussex also led on the development of a regional hydrogen strategy and investment proposition, which the Board supported financially and approved in 2023. This all puts the region very much at the forefront of a hydrogen fuel revolution and there is a great opportunity for the creation of high-skilled, green-collar jobs in this region.
- 3.9 Lewes District Council together with the Newhaven Enterprise Zone is developing an investment plan that will enable the Newhaven business sector to become net zero-carbon by 2030. Reaching net zero by 2030 will enable the Newhaven Enterprise Zone and surrounding enterprises to gain a competitive advantage and become environmental leaders at a regional and national level. Net zero solutions will primarily be greener, cheaper energy in commercial buildings and vehicles and will lay the foundation for the residential sector. A key technology solution will be solar PV.

- 3.10 Michelmersh is working on the world's first 100% hydrogen-fired clay bricks, HyBrick™ in Mid Sussex. It is a global flagship physical study to replace natural gas with green electrolytic hydrogen in brick manufacturing. Phase 1 of the project will demonstrate the viability of fuel switching and will see hydrogen used in the clay brick production process. The project aims to inspire radical change across the sector and present opportunities and evidence-based research to support manufacturers on their journey to heavily decarbonise the production processes. To develop this, Michelmersh worked alongside a panel of expert partners, and after an introduction by Hydrogen Sussex, the consortium includes Limpsfield Combustion, Net Zero Associates, the University of Brighton, Greater South East Net Zero Hub, FT Pipeline Systems, Geopura and Safety Monitors.
- 3.11 Ricardo is a global strategic environmental and engineering consultancy. Ricardo and partners, Bluebox Energy and Woodtek Engineering, have designed, built and installed a combined heat and power demonstrator plant with a carbon negative footprint in West Sussex. Once operational in summer 2024, their demonstrator plant will showcase climate repairing technology, and demonstrate the effectiveness of community scale, carbon capture technology plus clean energy using sustainably sourced forestry, green or agricultural waste. Their demonstrator will show how the other outputs from the plant: food-grade carbon dioxide and biochar, can support food and drink manufacturers, farmers and commercial growers, concrete manufacturers and biomass specialists in decarbonising their operations.
- 3.12 The work described above demonstrates that building economic, environmental, and social resilience is a strategic priority for the Board and that Greater Brighton partners and Sussex organisations are ambitious and innovative in striving to achieve carbon reduction targets. Food also fits within these areas of focus. Food system vulnerabilities have been revealed during the covid-19 pandemic and supply chain geopolitical risks, such as the war in Ukraine. Opportunities now exist to improve local supply chains and infrastructure. The Board is in a position to be proactive. In 2021 the Board agreed to support the scoping work for a Greater Brighton Food Plan focussed on promoting sustainable agriculture, building resilience and integrating innovations.

Sussex Energy: Current Use / Supply

- 3.13 Whilst there is much good work going on across the region, there is a need for a step-change in the level of ambition and activity. Current baseline data suggests that both Greater Brighton and the wider Sussex area are significant net importers of energy. Current energy demand¹ for heating buildings, fuelling vehicles and supplying electricity to homes and businesses totals 15.2 TWh/yr for Greater Brighton and 26.9TWh/yr for Sussex. The current supply of energy from renewable sources is 2.0TWh/yr for both Greater Brighton and Sussex, which is largely the supply from Rampion Phase 1. Looking at demand against supply leaves a shortfall or net import of energy of 13.2TWh/yr for Greater Brighton and 24.9TWh/yr for Sussex. If the region is to transition to net zero-carbon ahead of the UK target², and to achieve a level of energy resilience and security, this needs

¹ Energy demand data is 2021 data from <https://www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level>. Breakdown by sector available.

² [Net Zero Government Initiative: UK roadmap to net zero government emissions \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/net-zero-government-initiative-uk-roadmap-to-net-zero-government-emissions)

to be adjusted. The Board can take a leadership role across the Sussex region in addressing the huge differential between demand and supply.

The Grand Challenge

- 3.14 The Greater Brighton and wider Sussex areas are significant net importers of energy. The challenge is for the area to produce as much energy as it uses by reducing energy demand and increasing supply of zero-carbon energy generated within the region by 2040. For clarity this doesn't mean that Greater Brighton and Sussex would only use energy produced in the area, it is about levelling the total amount of energy used by our community on an annual basis with the amount of zero-carbon energy created within the community.

Vision

- 3.15 We imagine transforming our community into a model of sustainability and resilience, where every home, business, and public space thrives on 100% zero-carbon, affordable energy, fostering a healthier environment, robust economy, and equitable society for all.

Mission Statement

- 3.16 Our mission is to achieve net zero energy status by 2040, where the total amount of energy used by our community on an annual basis is equal to the amount of zero-carbon energy created within the community with local people benefit directly from this energy production thereby significantly reducing our carbon footprint, reducing our reliance on imported energy and contributing to the global fight against climate change.

What is possible?

- 3.17 There are two approaches that the region will need to follow to improve the balance between energy demand and zero-carbon supply, and the first is to reduce energy demand. For example, heat pumps are three times more efficient than traditional gas and oil-fired boilers and as heat pumps are run completely on electricity, by moving to them we can remove the use of fossil fuels if the electricity powering them is green. Electric vehicles can be up to four times more efficient than those powered by fuel engines, so electrifying heating and transport will help deliver this change. By assuming full replacement of these technologies, annual energy demand can fall to 10.5TWh, though this does not include the effects of growth and behaviour change which will also impact demand.
- 3.18 The second is to increase zero-carbon energy generation. A second phase of Rampion Wind Farm is under development, which upon completion will increase the region's annual generation of renewable energy to 5.6TWh, which is around four times the current level of renewable generation. This will be increased by the deployment of other onshore renewables and clean power sources. This could include onshore wind turbines, large scale solar farms, rooftop solar, and conventional power stations fitted with carbon capture. There are also opportunities around the community creation of renewable energy and linking the energy generated to its location.

Next Steps

3.19 The immediate next step would be to convene the four thematic working groups outlined in paragraph 2.6. These working groups would bring together industry experts, stakeholders and new partners to start building a strategic approach to local energy strategy at a Sussex level. There is a strong rationale for doing this - the future for housing, food production, nature, and energy and to support the best possible local energy planning and sub-regional strategic energy planning with UK Power Networks.

3.20 Initially, the working groups will be responsible for conducting a feasibility assessment of their theme to determine the practicality of delivering the Sussex Energy ambition. As part of this they would:

- Review what other regions are doing.
- Learn from best practice.
- Establish baseline measurements and targets.
- Establish a timeline of specific milestones that form the journey to 2040 and demonstrate clear progress towards achieving the 2040 goal.
- Assess viability of potential projects with a full understanding of their lifecycle.
- Build up a pipeline of projects with key performance indicators defined with challenges and gaps identified.
- Engage key stakeholders to tackle common challenges to accelerate project implementation (e.g. UKPN, planning, Asset Management, etc.).

The working groups will engage experts currently carrying out research/projects that can contribute to the mission to agree a shared purpose. By framing this ongoing work together as a group, it will highlight how it builds towards a shared vision, and that will help to attract investment from Government and the private sector. The mission statement at Appendix 1 outlines in greater detail the purpose and areas of focus of each of the proposed groups.

3.21 The pipeline of projects to deliver the Sussex Energy ambition is expected to be numerous and varied, with projects falling into one of the following three categories:

- a) Community and place-based solutions (e.g. energy installations, retrofitting, etc. organised by community group, co-operative, council, etc.)
- b) Scaled solutions (e.g. energy solution requiring deep collaboration by multiple partners, e.g. heat network).
- c) Strategic system interventions (e.g. tackling common challenges to help accelerate the launch of solutions).

To assure the delivery capability of Sussex Energy, funding would be sought for a Programme Management Office functionality to provide support, make connections and portray the full picture.

3.22 The £50,000 recommended to be set aside as initial funding from the 2024/25 budget (see paragraph 2.5) will be invested with a priority of securing additional funding that will allow the development of an investment vehicle and framework for Sussex Energy.

- 3.23 Encouraging collaboration and providing strategic leadership at a Sussex level, will help establish vital shared capacity to unlock key strategic models at scale such as urban district heat networks, net zero industrial clusters, social housing decarbonisation, low carbon villages etc. Organising this way is likely to attract external funding support through bids to government and investment funds.
- 3.24 Throughout this mission a core consideration will be the role the mission has in economic development via skills, procurement and partnering.

4. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS:

- 4.1 The Board could take a more passive approach and essentially carry on the status quo. However, as highlighted throughout this report, there is a clear opportunity, and this has been flagged by Government, for the Board to take a step forward in its ambition and provide the strong strategic leadership across the Greater Brighton region and wider Sussex area that is currently missing. Adopting a flagship ambition like Sussex Energy, which Board members, wider stakeholders and partners can coalesce around, will allow focused conversations with Government around the kind of levers and interventions required to make the ambition a reality.

5. COMMUNITY ENGAGEMENT & CONSULTATION:

- 5.1 In developing the Sussex Energy ambition discussions were had with Government and other partners including members of the Greater Brighton Sustainable Infrastructure Group. Consultation requirements will be different for each emerging workstream and will need to be considered within each of the projects/programmes.

6. CONCLUSION:

- 6.1 The Board is asked to agree the recommendations 2.1-2.6, which will effectively mean that the Board agrees to publicly outline the Sussex Energy ambition and sets out the next steps to progressing the proposal, starting with convening the four thematic working groups identified.

7. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

- 7.1 A total of £100,000 will be set aside from the Greater Brighton Economic Board Operational Budget to support the working groups in delivering the net zero energy status by 2045. A total £50,000 of initial funding will be met from the 2024/25 Operational Budget and a further £50,000 will be committed in 2025/26 to assist with delivering and securing additional funding for the development of an investment vehicle and framework for Sussex Energy

Finance Officer Consulted: Rob Allen, Principal Accountant

Date: 02/06/2024

Legal Implications:

- 7.2 There are no direct legal implications arising from the report.

Lawyer Consulted: Elizabeth Culbert

Date: 04/07/2024

Equalities Implications:

- 7.3 Projects and programmes arising will seek to ensure that the benefits are shared across the City Region. In addition, one of the ongoing aims of the work is to address inequalities by looking at how, for example, access to energy can be made will help to tackle fuel poverty.

Sustainability Implications:

- 7.4 The driving force behind Sussex Energy and workstreams within it, is to reduce carbon emissions and accelerate the journey to net zero, which will help protect the environment, enhance natural capital, limit the affects of climate change, and build resilience in key infrastructure and the supply of energy. This is the foundation of all work under the Sussex Energy umbrella, and this sustainability focus will also cascade into other workstreams.

Any Other Significant Implications:

- 7.5 None

SUPPORTING DOCUMENTATION

Appendices:

1. Sussex Energy Mission Statement