

# **BRIDGEND COUNTY BOROUGH COUNCIL**

## **REPORT TO THE SUBJECT OVERVIEW AND SCRUTINY COMMITTEE 3**

**11 JULY 2019**

### **REPORT OF THE CHIEF EXECUTIVE**

#### **BRIDGEND COUNTY LOCAL AREA ENERGY STRATEGY AND SMART ENERGY PLAN**

##### **1. Purpose of Report**

- 1.1 The purpose of this report is to update Committee on the progress being made to deliver the Bridgend Local Area Energy Strategy (LAES) and Smart Energy Plan.

##### **2. Connection to Corporate Improvement Objectives/Other Corporate Priorities**

- 2.1 The report contributes to the following outcomes within the Corporate Plan 2016-20:

Priority 1 – Supporting a successful economy - taking steps to make the county a good place to do business, for people to live, work, study and visit, and to ensure that our schools are focused on raising the skills, qualifications and ambitions of all people in the county.

Priority 3 – Smarter use of resources - ensuring that all its resources (financial, physical, human and technological) are used as effectively and efficiently as possible and support the development of resources throughout the community that can help deliver the Council's priorities.

##### **3. Background**

- 3.1 Bridgend County Borough Council (BCBC) has been engaged with the Smart System Heat (SSH) Programme since 2013 when it submitted a Pre-Qualifying Questionnaire (PQQ) to the Energy Technologies Institute (ETI) and was selected from over 70 local authorities from across the UK to be one of the shortlisted 11 prioritised authorities in the SSH Programme.

- 3.2 Participation in the SSH Programme was approved by Cabinet on 3<sup>rd</sup> February 2015.

- 3.3 The SSH Programme is divided into three phases with a degree of overlap across each phase:

Phase 1 Strategy - 2015 – 2017 – Use of the EnergyPath Network suite of tools to create a Local Area Energy Strategy (LAES) for Bridgend County Borough.

Phase 2 Development 2016 – 2018 – Development of a Smart Energy Plan for Bridgend County Borough and the creation of a “Living Lab” within Bridgend County Borough.

Phase 3 Delivery 2019 – 2025 – Deployment of projects from the Smart Energy Plan. The delivery of Phase 3 is subject to funding and partners being secured to progress with delivery. The funding will be from a variety of sources such as European, UK, Welsh Government (WG) and private sector.

3.4 The LAES and Smart Energy Plan were approved by Cabinet on 19<sup>th</sup> February 2019.

#### **4. Current Situation/proposal**

4.1 The LAES and Smart Energy Plan offer a route to achieving the decarbonisation of heat within Bridgend County Borough. The LAES proposes a pathway to achieving decarbonisation targets and the Smart Energy Plan provides the detail of how technologies, business models and consumer propositions will be deployed and tested in order that scale up can happen and the decarbonisation targets be achieved. The LAES is attached to this report at Appendix 1.

4.2 The decarbonisation transition is arguably the largest economic development opportunity Bridgend County Borough will have in the next 30 years. The LAES considers that with a local focus on the decarbonisation of heat the economic opportunity for Bridgend County Borough would be between £7.3 and £7.4billion.

4.3 The Smart Energy Plan formally maps out the near term delivery of the first phase of the LAES (up to 2025). The Smart Energy Plan is aligned to the Welsh Government Carbon Budget time periods and identifies the projects and activities to be delivered during this period. The Smart Energy Plan aims to deliver the following benefits:

- Decarbonise heat within Bridgend County Borough
- Stimulate economic growth
- Provide new job opportunities
- Attract new and existing businesses to trial initiatives and grow within the County Borough.

4.4 The Smart Energy Plan is attached at Appendix 2 to this report. A summary of progress made against projects listed as deliverables within the Smart Energy Plan is outlined below:

#### **Bridgend Town Heat Network – Phase 1**

4.4.1 The Bridgend Town Heat Network Project proposes to deliver heat (via a gas combined heat and power engine located within the Bridgend Life Centre) to the Bridgend Life Centre, Civic Offices, Bridgend Bowls Hall and the Wellbeing Centre and 59 housing units within the Sunnyside Wellbeing Village. The project will also

provide electricity to the Bridgend Life Centre, Civic Offices, Bridgend Bowls Hall and Wellbeing Centre.

4.4.2 A report was approved by Cabinet in April 2018 seeking approval for the financial case of the Outline Business Case for the project and to submit an application to UK Government through its Heat Network Investment Programme (HNIP). The UK Government HNIP grant scheme opened in January 2019 with the first round of applications closing 6th April 2019. An application was submitted for the Bridgend Town Heat Network Project for a grant of £1.934 million.

4.4.3 The next steps for the project are to begin the procurement process for the appointment of a Design, Build, Operate and Maintain contractor for the project. This is estimated to begin in July 2019 with a contractor in place by February 2020. The target date for the delivery of the project is December 2020.

### **Bridgend Town Heat Network – Phase 2**

4.4.4 Phase 2 of the Bridgend Town Heat Network project is being developed as an innovative partnership between BCBC, Welsh Water and Wales and West Utilities to supply homes and public buildings with heat from a hybrid source of gas and heat recovered from the sewerage network. Funding is being sought from Heat Networks Delivery Unit (HNDU) to develop a business case for the project. It is anticipated that a bid will be submitted in summer 2019 with a decision on this expected mid-Autumn 2019.

### **Domestic Energy Efficiency Project**

4.4.5 The Welsh Government has operated domestic energy efficiency programmes since 2009. A Phase 3 programme will run from 2018-2021 and will be delivered by Arbed am Byth. Cabinet approved on 16<sup>th</sup> April 2019 BCBC's participation in the scheme and BCBC will be working with Arbed am Byth to identify suitable areas where energy efficiency measures can be offered to residents.

### **Caerau Minewater Heat Scheme**

4.4.6 The Caerau Mine Water Heat Scheme is an innovative project aiming to utilise heat from the flooded former mine workings of the Caerau Colliery. The scheme is looking to supply 300 homes, community buildings and the primary school in its first phase of development. A feasibility study was completed in 2018 which showed that water is present beneath the village at a consistent temperature of 20.5°C and a techno-economic model shall be built for the project in 2019 which should establish the commercial position of the project.

4.4.7 The Coal Authority has undertaken a mine water resource assessment beneath the village and this will be validated through an intrusive investigation due to take place in 2019. Hitachi has completed an assessment of local energy supply options for the heat pumps and as an alternative to a grid connection a connection to a local wind farm via a private wire is being explored.

4.4.8 The next stage of the project is to develop an Outline Business Case (OBC) that will present the commercial delivery options for the project. Following the completion of the OBC a report will be presented to Cabinet making recommendations for the next phase of the project should the OBC be shown to be commercially viable. Funding of £6.5m has been secured from WEFO through the European Regional Development Fund to assist in the delivery of the project and a further offer may be forthcoming subject to a re-profiling of the financial model that had previously been submitted to WEFO together with a revised Business Case.

### **Small Business Research Initiative**

4.4.9 BCBC has secured funding (£200,000 for Phase 1) through the Welsh Government Small Business Research Initiative (SBRI). Phase 1 will seek innovative ideas to reduce the cost of developing heat networks. Phase 1 is likely to begin in September 2019 and end in spring 2020. Phase 1 will allow innovative ideas to be brought forward, with up to four likely to be funded to develop a feasibility report for the idea.

4.4.10 If any of the ideas within Phase 1 are considered suitable, there may be a further opportunity to develop and test those ideas within the Caerau Mine water Heat Scheme. A further £1 million of Welsh Government funding may be available for this stage subject to the ideas generated through Phase 1 being considered suitable. Should the proposal progress to stage 2 match funding considerations will be considered and reported on as required at that time.

### **Electrification of Heat**

4.4.11 This project is a follow on from the SSH Programme and will be a collaboration between BCBC, Greater Manchester Combined Authority, Newcastle City Council and Energy Systems Catapult. The project aims to seek UK Government – Business Energy Industrial Strategy (BEIS) funding to develop an innovative electrification of heat project that identifies innovative business models and consumer propositions that enable homeowners to transition away from gas boilers. The current position of this project is that BCBC and its consortium partners are awaiting suitable funding opportunities to arise from BEIS.

### **Industrial Strategy Challenge Fund**

4.4.12 BCBC as part of a consortium led by Cenin Renewables Ltd (a local SME) and including Hitachi, First Cymru Bus and Cardiff University was successful in securing funding from Innovate UK (£172,000) to develop a high level design that integrates heat, power and transport vectors within the County Borough.

4.4.13 The design was completed on 30<sup>th</sup> June 2019 and will look at utilising the Parc Stormy site in Bridgend to charge electric buses and integrate the heat network projects at Caerau and Bridgend Town with sustainable transport solutions.

4.4.14 The intention is to seek further funding from Innovate UK to develop a detailed design for Bridgend that will create a local energy market into which innovators can test products and services and which can be scaled up across the region.

4.5 In order to establish an internal governance mechanism to oversee the delivery of the Smart Energy Plan, an internal Energy Programme Board has been set up with representatives from key departments across the Authority to oversee the delivery of the Smart Energy Plan. The Energy Programme Board reports to the Communities Directorate Management Team and then to the Corporate Management Board.

## 5 **Effect upon policy framework and procedure rules**

5.1 There are no effects upon BCBC's Policy Framework or Procedure Rules.

## 6 **Equality Impact Assessment**

6.1 There are no equality implications arising from this report.

## 7 **Well-being of Future Generations (Wales) Act 2015 implications**

7.1 The LAES and the Smart Energy Plan are a positive step in regard to the Council's role in complying with the Well-being of Future Generations (Wales) Act 2015. BCBC is taking a positive proactive role within the decarbonisation agenda which will ensure that the significant environmental, social and economic opportunities created through the decarbonisation transition of the energy market will be captured for Bridgend.

7.2 In terms of meeting the 5 ways of working within the Act:

**Long Term:** The LAES and Smart Energy Plan will provide the template and the tools to provide Bridgend County Borough with a decarbonised heat system that meets the UK 2050 decarbonisation targets.

**Prevention:** The LAES and Smart Energy Plan will provide an opportunity for all to benefit from the decarbonisation transition and ensure that solutions are designed and available for everyone and not just the ability to pay market.

**Integration:** The LAES and Smart Energy Plan offers an opportunity to create a low carbon hub within Bridgend that will offer carbon reductions, reduced fuel bills and create economic opportunities through a clearly identified value chain.

**Collaboration:** BCBC is working with both UK Government and Welsh Government as well as private sector partners to deliver the decarbonisation agenda.

**Involvement:** The Smart Energy Plan involves working with a variety of stakeholders to deliver sustainable solutions around the delivery of decarbonised heat for residents.

## 8 Financial implications

- 8.1 The LAES and the Smart Energy Plan have been funded and produced through Phase 2 of the SSH Programme which has been funded through the UK Government Department for Businesses, Energy and Industrial Strategy (BEIS).
- 8.2 BCBC is not committing to funding all of the project proposals included within the Smart Energy Plan but will play an enabling and facilitation role to bring together the funding partners and the consumers for the successful delivery of the projects.
- 8.3 It is not anticipated that funding for all the projects identified will pass through BCBC.
- 8.4 A summary of what is currently considered to be the overall financial envelope of the delivery of the Smart Energy Plan projects outlined in section 4 of this report is below. It is noted that a number of these projects are at early stage development and therefore costs are subject to change. All funding proposals will only be taken forward with agreement from S151 Officer.

Project name	Funders	BCBC Contribution £m	External Contribution £m	Overall value £m
Bridgend Town Heat Network – Phase 1	HNIP, BCBC, WG, Accumulated reserves	1.579	2.650	4.229
Bridgend Town Heat Network – Phase 2	Welsh Water, Wales and West utilities, BCBC, HNDU	-	0.200	0.200
Domestic Energy Efficiency Project	WG			TBC (typically £5k per property is available)
Caerau Minewater Heat Scheme	ERDF/WG/BCBC (matched funding staff)/ESC	0.387	9.649	10.036
SBRI	WG/ERDF	-	2.200	2.200
Electrification of Heat	BEIS	-	15.000	15.000
Industrial Strategy Challenge Fund	Innovate UK	-	3.000	3.000

*HNIP - Heat Network Investment Project*

*HNDU - Heat Networks Delivery Unit*

*ERDF - European Regional Development Fund*

*ESC - Energy Systems Catapult*

*SBRI - Small Business Research Initiative*

*BEIS - UK Government Department for Business Energy and Industrial Strategy*

## 9 Recommendation

9.1 That the Committee note and comment on the content of this report.

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**11<sup>th</sup> July 2019**

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### **Background Documents:**

None