

BRIDGEND COUNTY BOROUGH COUNCIL

REPORT TO CABINET

18th JANUARY 2022

REPORT OF THE CORPORATE DIRECTOR - COMMUNITIES

BRIDGEND LOCAL AREA ENERGY PLAN

1. Purpose of Report.

1.1 The purpose of this report is to present to and seek approval from Cabinet for the refresh to the Bridgend Local Area Energy Plan (LAEP).

2. Connection to corporate well-being objectives / other corporate priorities

2.1 This report assists in the achievement of the following corporate well-being objectives under the **Well-being of Future Generations (Wales) Act 2015**:-

1. **Supporting a successful sustainable economy**– taking steps to make the county borough a great 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 borough.
2. **Smarter use of resources**– ensure that all its resources (financial, physical, ecological, human and technological) are used as effectively and efficiently as possible and support the creation of resources throughout the community that can help deliver the Council's well-being objectives.

3. Background.

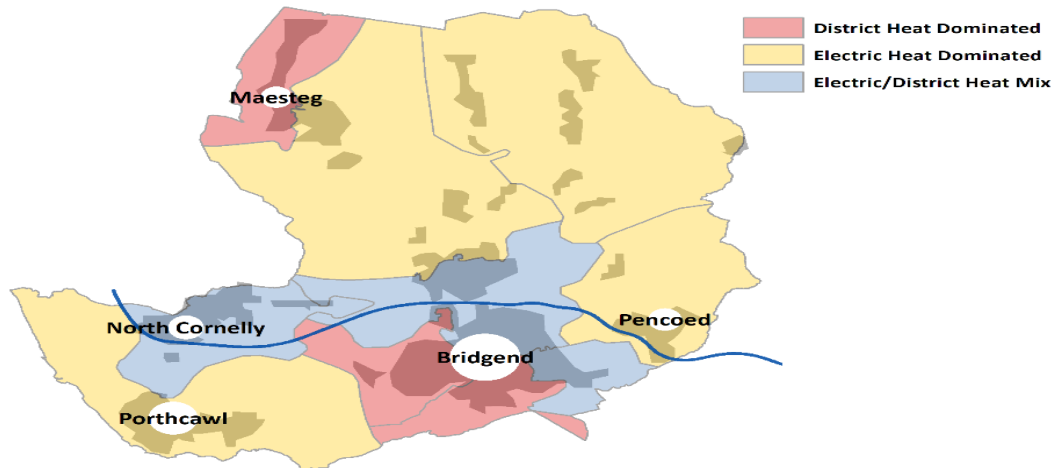
3.1 Bridgend County Borough Council was selected in 2014 as one of the three demonstration areas for the UK Government Smart System and Heat Programme. Cabinet authorised BCBC participation in the SSH Programme in a report presented on the 3rd February 2015. The programme was designed to create innovative tools that would enable heat to be decarbonised across the UK in line with 2050 carbon reduction targets.

3.2 One of the tools that was created within the Smart System and Heat Programme was Local Area Energy Plans (LAEP). LAEP does not adopt a traditional approach to strategy development in that it does not offer a clear what, when and how activities need to happen in order to achieve the 2050 decarbonisation targets. Rather the LAEP proposes a pathway to achieving those targets.

3.3 LAEP is an area based tool that considers local characteristics such as building type, fabric energy efficiency etc. and using the EnergyPath Networks tool developed by the Energy System Catapult creates a pathway to achieving decarbonisation. As part of the Smart System and Heat Programme a LAEP was developed for Bridgend

County Borough that created a potential route map for the decarbonisation of heat at the local level. Figure 1 is a graphical display of the plan and the technologies suggested to achieve the decarbonisation of Bridgend County Borough.

Figure 1. Bridgend Local Area Energy Plan (2018)



- 3.4 The Bridgend LAEP was developed via a partnership between BCBC, Energy Systems Catapult, Welsh Government, Western Power Distribution and Wales and West Utilities. The Bridgend LAEP was completed in 2018 and the recommendations of the Bridgend LAEP were accepted by Cabinet in February 2019.
- 3.5 The Bridgend LAEP was presented as a Local Area Energy Strategy in the report to Cabinet in February 2019. Following the publication of formal guidelines commissioned by OFGEM and prepared by the Energy Systems Catapult and the Centre for Sustainable Energy in 2020 the documents are now universally referred to as Local Area Energy Plans and this is the terminology that will be used within this report.
- 4. Current situation / proposal.**
 - 4.1 Following Cabinet's decision in February 2019, the UK Government has moved the UK carbon reduction targets away from an 80% reduction by 2050 to one of Net Zero by 2050. The Bridgend LAEP was based around achieving the 80% reduction target.
 - 4.2 Following the change in the UK Government's targets for carbon reduction, BCBC considered its position in relation to its LAEP and considered that a refresh of the plan was needed to maintain its relevance. The refreshed LAEP will not replace the original LAEP but rather provides updated modelling that will need to be viewed alongside the original LAEP. The refresh serves only to update the modelling to capture significant changes that have occurred since the original LAEP such as the UK Government Net Zero target of 2050, the phasing out of fossil fuel vehicle sales by 2030 and the role that hydrogen could have in delivering a Net Zero Bridgend.
 - 4.3 Welsh Government supported BCBC in the refreshing of its LAEP and provided a £47,000 grant to cover the costs of updating the plan.

- 4.4 The Energy Systems Catapult were appointed to start updating the Bridgend LAEP in April 2021. The partnership approach used to deliver the initial plan was reformed and assisted in the shaping of the refreshed Bridgend LAEP.
- 4.5 The refreshed LAEP was developed to align with the UK Government Net Zero carbon reduction target and also consider the role that hydrogen could have in delivering a Net Zero Bridgend. Two scenarios are presented within the refreshed LAEP firstly a Net Zero Bridgend without hydrogen and a Net Zero Bridgend with hydrogen. Figures 2 and 3 graphically displays how each option looks. The full refreshed LAEP is contained at Appendix 1 to this report.

Figure 2 Refreshed Bridgend LAEP (without hydrogen)

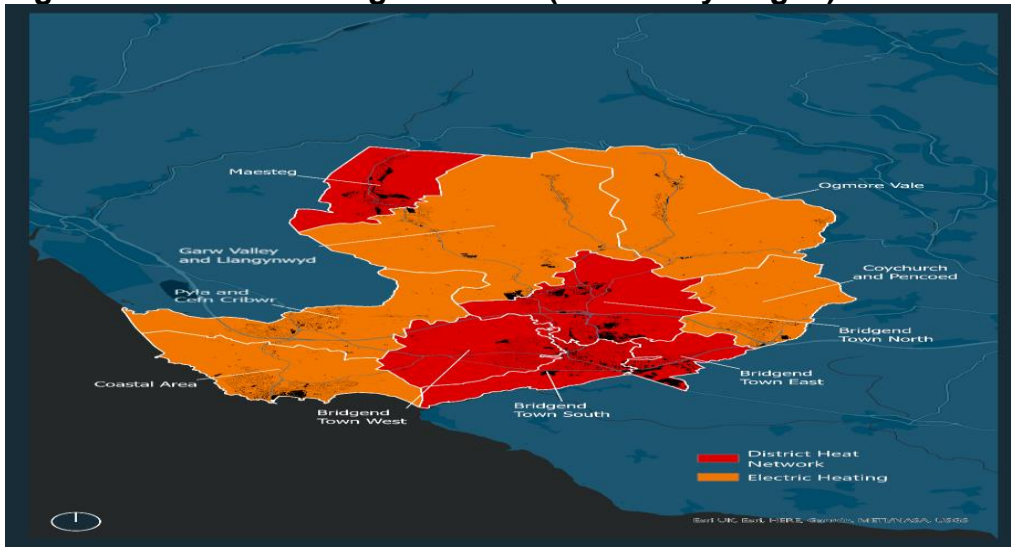
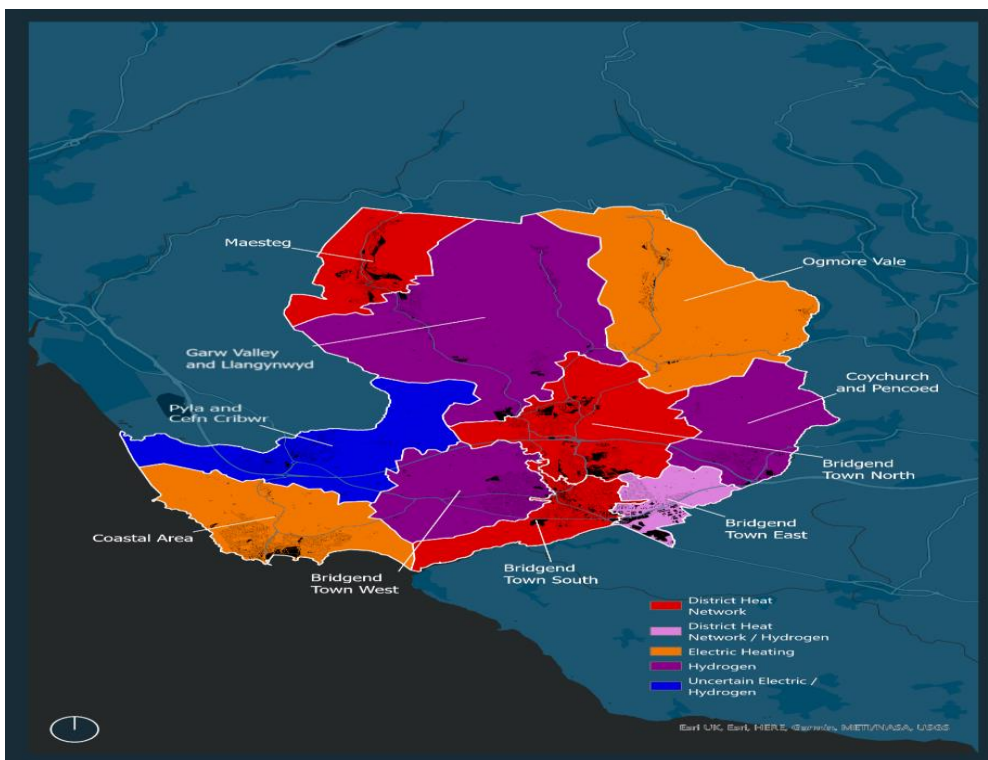


Figure 3 Refreshed Bridgend LAEP (with hydrogen)



- 4.6 The transition to reach a Net Zero Bridgend as laid out in the refreshed LAEP will involve whole-scale infrastructure change across Bridgend over the next two decades. Key sections of this LAEP refresh illustrate the scale of change and investment needed, based on a primary scenario. An alternative scenario focusing on hydrogen for heat is presented and discussed with hydrogen having the potential to play an important role in the decarbonisation of Bridgend. Given the importance of having a view of the future (or scenario) now, this document promotes a demonstration and scale-up approach over the coming short-term, before moving to full-scale implementation. Therefore, this document highlights several 'priority areas' in which to work with citizens and stakeholders to build capacity and test approaches to delivery.
- 4.7 Two scenarios have been created for the purpose of this LAEP refresh: a primary (cost-effective) scenario and a secondary (hydrogen) scenario. It is not intended that the Council choose a scenario to pursue but rather both scenarios are presented as potential future decarbonisation pathways for Bridgend County Borough. The Council via its Smart Energy Plan (which will be reviewed, updated and reported to Cabinet as considered necessary to reflect the refresh in the LAEP) will develop projects that test and validate both scenarios and this information will help shape and inform the direction of decarbonisation in the decades ahead. Ultimately it must be remembered that the market will largely dictate the direction that decarbonisation takes through the choices that consumers (commercial and non-domestic) make.
- 4.8 The primary scenario makes assumptions around changes to behaviour and advances in technology and innovation whilst recognising uncertainty in key areas such as the potential use of hydrogen for transport and heating in homes and buildings, as well as advances in energy storage and controls. While it is not a prescriptive plan to be followed exactly, it does provide a detailed spatial evidence base and supporting data that can be used to inform the planning and coordination of activity in Bridgend over the coming years. Even if hydrogen for building heating does become available, it is expected that all the components within the primary pathway (heat pumps, district heating, solar PV, EV charging, building fabric retrofit and flexibility and storage systems) will still be needed to decarbonise Bridgend; any uncertainty is generally around the scale of deployment. Therefore, it is deemed low risk to demonstrate how to deploy these components and prepare for significant scale-up.

5. Effect upon Policy Framework & Procedure Rules.

- 5.1 There is no effect upon the Council's Policy Framework or Procedure Rules as a result of this report.

6. Equality Act 2010 Implications

- 6.1 The protected characteristics identified within the Equality Act, Socio-economic Duty and the impact on the use of the Welsh language have been considered in the preparation of this report. As a public body in Wales, the Council must consider the impact of strategic decisions, such as the development or the review of policies, strategies, services and functions. It is considered that there will be no significant or unacceptable equality impacts as a result of this report

7. Well-being of Future Generations (Wales) Act 2015 Assessment

7.1 The well-being goals identified in the Act were considered in the preparation of this report. The Act provides the basis for driving a different kind of public service in Wales, with five ways of working to guide how the Council should work to deliver wellbeing outcomes for people. The Council must act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

7.2 The LAEP addresses the five ways of working under the Act through:

- **Involvement:** The plan involves working with a variety of stakeholders to deliver sustainable solutions around the delivery of decarbonised heat for residents.
- **Long Term:** The LAEP will provide the template and the tools to provide Bridgend County Borough with a Net Zero energy system that meets the UK 2050 decarbonisation targets.
- **Prevention:** The LAEP 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 LAEP 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 in partnership with both Government and the private sector to deliver the decarbonisation agenda.

8. Financial Implications.

8.1 The costs of developing the refreshed LAEP has been fully funded by Welsh Government. Any projects emerging from the LAEP where BCBC is lead or requested to contribute funding, will be developed in line with usual processes with business cases being developed and funding sought to deliver the projects.

8.2 The Bridgend LAEP recognises that the decarbonisation of heat within Bridgend County Borough is not something that can be achieved and funded by BCBC alone. The delivery of the LAEP requires significant private investment (domestic and non-domestic) and the majority of this will happen without the direct involvement of BCBC. The Bridgend LAEP should be viewed as a guidance document for the decarbonisation of heat within the County Borough, creating a spatial awareness plan for a Net Zero Bridgend providing an informed direction of travel that will allow decisions to be made and planning carried out that will facilitate both environmental and economic benefits from the journey towards Net Zero.

9. Recommendation.

9.1 It is recommended that Cabinet:

- Approves the refreshed Bridgend Local Area Energy Plan.

Janine Nightingale
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6th January 2022

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Background documents

BCBC Local Area Energy Strategy Refresh Report, August 2021.