

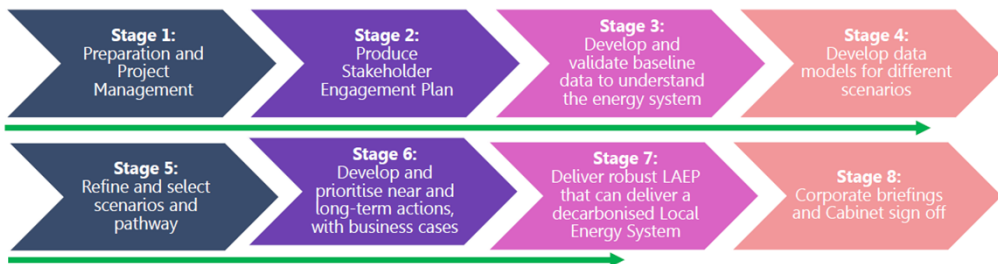
Cabinet Meeting

17th June 2024

Carmarthenshire Local Area Energy Plan

Background

1. Welsh Government have funded the development of Local Area Energy Plans (LAEPs) to ensure coverage across all 22 local authority areas in Wales by mid-2024. This follows several local authorities being pilot locations, plus Pembrokeshire which produced a LAEP in 2022 as a condition of funding for the Milford Haven: Energy Kingdom project.
2. The South-West Wales Region's LAEPs are being delivered by City Science for Swansea, Neath Port Talbot, and Carmarthenshire.
3. Local Area Energy Planning is a detailed, comprehensive process designed to identify the most effective pathway(s) to decarbonising the local energy system by 2050. The process is led by Local Government and developed collaboratively with defined stakeholders. Although produced separately and tailored to the local landscape, the three LAEPs will be aligned regionally to help ensure consistency.
4. The LAEP programme started in February 2023 and runs until end of May 2024. It consists of eight stages:



5. Final LAEPs have been delivered for local authority Cabinet sign-off.
6. Welsh Government have also funded, for 24 months ending 31/01/2026, the appointment of a Regional Energy Team consisting of an Energy Project Manager plus two Energy Project Officer posts. Whilst these posts are employed by Carmarthenshire County Council, as the lead for the SW Wales Region, they are a regional resource for the four local authorities.

Local Area Energy Plans (LAEPs)

7. A LAEP sets out the changes required to transition an area’s energy system to net zero carbon emissions by 2050, against a specified timeframe and under a specific local scope.

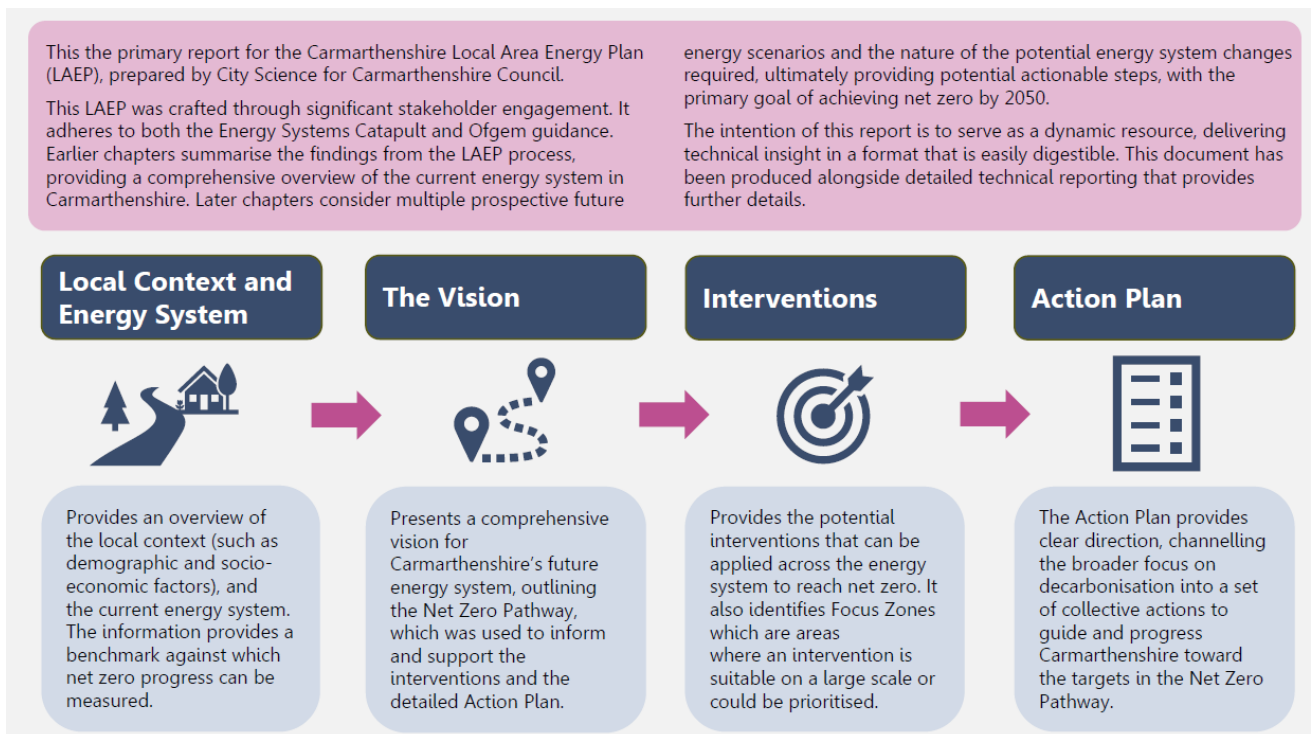
The objectives of the plans include:



Carmarthenshire LAEP

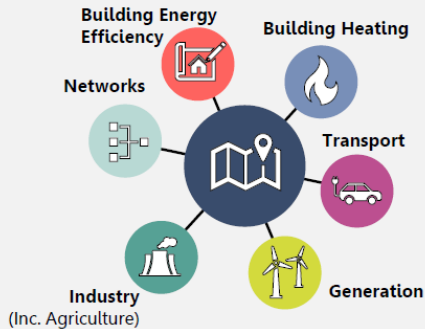
8. A copy of the Carmarthenshire LAEP is attached.

Extracts from the Executive Summary:



Intervention Areas

Specific interventions required to achieve a net zero energy system under the Widespread Engagement Scenario were assessed across all sectors within the LAEP. These are presented in detail, including a spatial analysis of where they would be needed, which will support implementation programmes and identification of potential synergies from different actions.



The analysis from these intervention areas was combined with extensive stakeholder engagement to develop the final Action Plan.

Interventions were assessed across key factors for each sector, such as carbon emission savings, cost and energy reduction. This supports in determining the priority order of intervention and informs the local authority of the scale of cost required and the associated benefit.

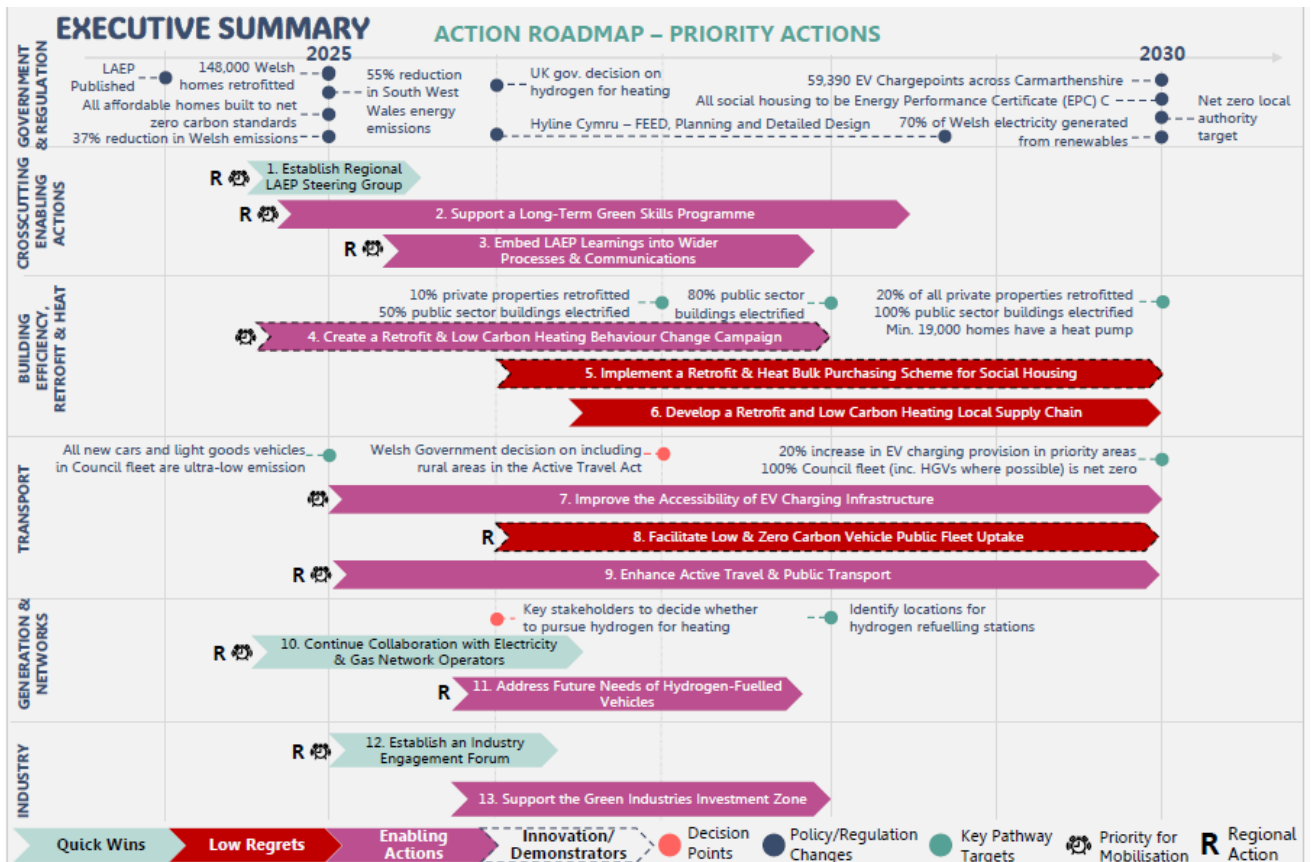
Focus Zones were determined for areas where a given intervention is considered to be 'low regrets', i.e. it is recommended across all modelled scenarios. A summary of these Focus Zones is given on the following page, shown by the Plan on a Page.

Interventions were chosen through engagement with stakeholders to determine the decarbonisation solutions that aligned with local policy and plans as well as supporting wider factors, such as alleviating fuel poverty. Some key findings across the intervention sectors are shown below.

- Applying shallow (80%) and deep (20%) retrofitting can offer an 8% energy saving across all buildings.
- The area will require 6,000 heat pumps by 2030.
- Buses will make up 25% of the 2050 transport electricity demand, requiring strategic charging locations.
- Renewable generation has the potential to increase 10-fold, and total generation in the area could exceed demand.
- Over 80% of energy for industry could be supplied by hydrogen, benefiting from local infrastructure projects.
- The 2050 electricity demand is estimated to be 2.4x the baseline, requiring network investment in Llanelli and many rural areas.

The Electrification Challenge

Net zero demands significant electrification, which will require increased capacity for both demand and generation on the electricity grid. The cost to increase capacity is substantial, with estimates of up to £200mn and £500mn for demand and generation respectively. Measures which reduce capacity needs, such as large energy storage and demand flexibility should be prioritised. A key focus after this LAEP will be to collaborate with National Grid Electricity Distribution (NGED) to forecast and plan for future demand and generation to enable efficient and timely grid upgrades.



9. Whilst LAEPs have a common format across Wales, the maps contained within the Carmarthenshire LAEP and Technical Annex have been clarified to indicate “spatial zones for potential further work” rather than specific locations.
10. Following completion of all 22 LAEPs there will be an exercise undertaken by the technical advisors to Welsh Government to align and consolidate the findings. This will then inform the further development and strategic direction of regional actions and contribute to the creation of a National Energy Plan.

Recommendation

11. To note and approve the Carmarthenshire Local Area Energy Plan for publication.

Appendix: Carmarthenshire Local Area Energy Plan