

**Public - Yes**  
**Key Decision – No**

## HUNTINGDONSHIRE DISTRICT COUNCIL

**Title/Subject Matter:** Local Area Energy Plan 2025/26

**Meeting/Date:** Environment, Community and Partnerships  
Overview and Scrutiny Panel – 09/03/2026

**Executive Portfolio:** Climate, Transformation and Workforce – Cllr  
Lara Davenport-Ray)

**Report by:** Harriet Robinson – Interim Place Strategy and  
Climate Lead

**Ward(s) affected:** All

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### **Executive Summary:**

The Cambridgeshire Local Area Energy Plan (LAEP) sets out a robust, evidence-based and spatially targeted pathway towards its goal of reaching carbon net zero by 2045. This aligns with Huntingdonshire's growth ambitions and infrastructure needs, identifying the lowest-regret interventions across buildings, transport, industry, local generation and the electricity network. It quantifies investment needs and benefits and proposes a phased delivery roadmap to 2045 across the County. The LAEP was a project led by Cambridgeshire County Council (CCC) with Huntingdon District Council (HDC) acting as a contributing member to the creation of the Plan.

The LAEP directly supports HDC's Place Strategy, which sets out a vision to make Huntingdonshire a better place to live, work and visit over the next 30 years. It also supports the Corporate Plan and Climate Strategy as follows:

- Climate Strategy – reduce energy use, shift to renewables
- Corporate Plan, Action 44 – minimise use of fossil fuels for energy where there is a social, environmental or financial case

The LAEP will guide area-based retrofit, prioritise fuel-poverty action, aim to accelerate clean growth and improving health outcomes through warmer, healthier homes and cleaner air. It also acts as a shared evidence base for planning, funding bids and partnership delivery across the District and the relevant unitary authorities pending local government reorganisation (LGR).

The development of the LAEP began at the end of 2023 with the establishment of the LAEP steering group. This was led by CCC and included representatives from the Cambridgeshire and Peterborough Combined Authority (CPCA), HDC,

Cambridge City Council (CC), East Cambridgeshire District Council (ECDC) and South Cambridgeshire District Council (SCDC). Fenland District Council (FDC) were keen to participate but were unable to resource their support at the time. Stakeholder engagement consisted of a series of workshops, an online survey and technical modelling that ran in parallel to establish potential scenarios for future energy needs. Full descriptions of this will be provided once the final LAEP has been approved by CCC and the CPCA. A summary document has been provided with this report to summarise to Members how the LAEP can assist as an evidence base for potential funding investments for Huntingdonshire.

**Recommendation(s):**

1. To note the strong alignment with HDC's Place and Climate strategies and Corporate Plan outcomes.
2. To review and comment on the Cambridgeshire LAEP document summary
3. To provisionally acknowledge the LAEP as a guide for organisations undertaking retrofit and decarbonisation across their assets in Huntingdonshire.
4. To note that the LAEP will act as a principle, evidence base as an enabler to secure future external funding.
5. This will sit alongside formal strategies and policies where relevant and as such, this does not require a formal decision by Members.

## 1. PURPOSE OF THE REPORT

- 1.1 The purpose of this report is to present a summary of the Cambridgeshire LAEP for consideration and approval as part of a strategic, county-wide, evidence-based roadmap to net zero 2045. It will also aim to highlight the guiding points that are place-specific for Huntingdonshire. It will guide investment and spatial planning and coordinate delivery with the United Kingdom Power Networks (UKPN) and National Energy System Operator (NESO). It will aim to provide a shared framework for partners to bring forward retrofit, heat decarbonisation, EV infrastructure, local renewables and flexibility projects.
- 1.2 There has previously been no formally structured planning process to help local governments transition to low carbon energy systems. Current planning processes for infrastructure in the UK are not delivering the scale of intervention necessary to meet the UK's legally binding goals. A LAEP is a system that has been designed to provide a long-term framework to decarbonise energy systems in the UK and to provide an opportunity for dialogue between local governments, energy network operators, consumers and other stakeholders.
- 1.3 This report provides a summary of the LAEP prior to its pending approval through the CPCA's Growth Committee on 11<sup>th</sup> March 2026 and its Board on 18<sup>th</sup> March 2026. The summary highlights current progress and sets out HDC's position and the actions already underway to reduce emissions. It demonstrates how HDC is continuing to:
- **Lead by example** through its commitment to becoming a net-carbon-zero Council by 2040.
  - **Enable action** by supporting our communities, partners and local organisations to accelerate their own transition
  - **Encourage collective effort** ensuring everyone who lives, works or visits the District can contribute to reducing carbon. This includes those who live, work and visit Huntingdonshire help to reduce carbon emissions.
  - **Provide an evidence base** and a guide for residents and businesses by helping to pinpoint the most effective local energy solutions that support growth, resilience and transition to net zero.
- 1.4 The LAEP is currently owned jointly by its steering group. The paper presented to the CPCA discusses the need to establish who the long-term owner will be.

## 2. BACKGROUND

- 2.1 A LAEP is a local, spatial energy plan developed with district councils, UKPN and the Greater South East Net Zero Hub (GSENZH). It models 4 scenarios – counterfactual, electric engagement, hydrogen revolution and the preferred option, a holistic transition – to rest cost, benefits and feasibility to reach carbon net zero across Cambridgeshire to 2045. It focuses on areas councils can influence: buildings, personal transport,

local-connected industry and distribution-connected generation and flexibility.

- 2.2 In terms of the policy and regional context, the LAEP aligns with national policy (e.g. Clean Power, Future Homes and Buildings Standard, Warm Homes Plan) and with the CPCA Local Growth Plan and Infrastructure Delivery Framework. These highlight energy as a binding growth constraint and underscore the value of LAEP evidence to prioritise network enforcement and sequencing of development.

### 3. KEY PROJECT PARTNERS

- 3.1 Led by CCC, the steering group for this project consists of CCC, HDC, the CPCA, SCDC, CC and ECDC. FDC were keen to participate but were unable to resource their support at the time.
- 3.2 An advisory group supported the steering group, including UKPN, the GSENGH, the University of Cambridge and Anglia Ruskin University (during initial stages) and NESO in the later stages.
- 3.3 Following procurement in late 2024, the project was supported by technical expertise from CAG Consultants for stakeholder engagement and Mott MacDonald for the technical modelling and production of the report.
- 3.4 Funding for the LAEP was secured from across the steering group, consist of contributions of:

Partner	Amount contributed
CPCA	£260,000 (£60,000 approved in 2023 and a further £200,000 approved in September 2024)
CCC	£30,000
HDC	£10,000
Greater Cambridgeshire Shared Planning Service (CC and SCDC contribution)	£20,000
	Other partners provided in-kind support via provision of resource

### 4. STAKEHOLDER ENGAGEMENT

- 4.1 Stakeholder engagement took place during summer/autumn 2025, including 6 workshops and an online survey. It involved 96 stakeholders across businesses, the NHS, emergency services and community organisations.
- 4.2 The technical modelling underpinning the LAEP was carried out alongside wider evidence gathering. This work assessed how future energy demand and infrastructure requirements could evolve under different assumptions. It explored:

- A baseline ‘counterfactual’ pathway, reflecting how the energy system is likely to develop if only current national and local policy commitments progress, without additional intervention.
- 3 forward-looking net zero scenarios based on UKPN’s established projections for electricity network change, each reflecting varying levels of local engagement, uptake of emerging technologies and the influence of a supportive policy environment.
- Growth sensitivity testing, which examined how differing levels of planned and anticipated development could alter infrastructure needs within each scenario.

## 5. WHAT THE LAEP WILL MEAN FOR HUNTINGDONSHIRE

- 5.1 **Emissions and needs:** county-wide emissions have fallen approximately 35% since 2005 (largely from grid decarbonisation) but transport emissions still remain high and gas heating dominates. Electronic vehicle (EV) uptake is still modest and many homes remain below an energy performance certificate (EPC) rating of C. Huntingdonshire itself has approximately 6,700 fuel-poor households.
- 5.2 **Networks first:** under all net-zero scenarios, substation headroom turns negative by the late 2030s without proactive upgrades. The Huntingdon primary substation shows early pressure and requires coordinated planning with the UKPN and NESO.
- 5.3 **Economics:** delivering the holistic transition scenario as stated in the summary in Appendix 1. This requires approximately £2.7-£3.4 billion additional capital expenditure beyond the counterfactual but generates £3.5 billion in carbon benefits, £1.2 billion in bill savings and £5.7 billion gross value added until 2045.
- 5.4 **Place Strategy alignment:** the LAEP’s short, medium and long-term actions reinforce Place strategy delivery, using retrofit and heat decarbonisation to tackle inequality/fuel poverty aligning with ‘health embedded’, EV and active-travel infrastructure to support ‘travel transformed’ and local renewables and innovation to drive an ‘inclusive economy’ and ‘environmental innovation.’
- 5.5 **Local Plan alignment:** the LAEP will support delivery of policy LP 35, ‘Renewable and Local Carbon Energy’ in HDC’s Local Plan to 2036. Looking forward, it will align with the aspirations set out in the Preferred Options Draft Local Plan to 2046. This seeks to support development of renewable energy schemes in areas identified as providing potential for effective schemes within the evidence base for climate change (see Appendix A in the Renewable Energy Assessment link) Areas of strong potential areas mapped within this will provide a guide to preferable locations for communities and scheme developers. The draft Local Plan also looks to enable action by support community led renewable and low carbon energy schemes.
- 5.6 **Climate Strategy alignment:** the LAEP directly supports HDC’s Climate Strategy by setting out practical, evidence-based pathways to reduce area-wide emissions in line with the District’s net zero ambitions. Its focus on building decarbonisation, renewable energy deployment, low-carbon transport and grid readiness compliments the Strategy’s priorities around mitigation, resilience and enabling a just transition. By identifying local opportunities for carbon reduction and coordinating action across partners, the LAEP strengthens the District’s ability to delivery sustained emissions cuts while supporting communities and businesses to adapt to a changing climate

5.7 The table below demonstrates the potential short, medium and long-term phasing across 2025 to 2045:

Short term: 2025-2030	Medium term: 2030-2035	Long term: 2035-2045
<ul style="list-style-type: none"> <li>• Rapid scale-up of heat pumps and building retrofit in social housing and fuel-poor areas</li> <li>• Rollout of on-street EV charging in high-demand areas</li> <li>• Feasibility and piloting of district heating</li> <li>• Targeted industrial engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Major network upgrades</li> <li>• Expansion of district heating zones</li> <li>• Large-scale rooftop solar and storage</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of industrial fuel switching (electricity/hydrogen)</li> <li>• Final push to replace residual gas heating</li> <li>• Full flexibility integration into the grid</li> </ul>

## 6. KEY IMPACTS / RISKS

- 6.1 Not adopting a LAEP creates significant risks including:
- Slower progress towards net zero targets due to the absence of a clear, evidence-based roadmap.
  - Poorer coordination of infrastructure investment and network planning, resulting in higher long-term costs and delays to electrification and reduced ability to attract or de-risk private investment because stakeholders lack clarity and confidence in local delivery pathways
  - Inconsistent decision making across transport, buildings and energy systems, limiting efficiency and missing opportunities for local economic growth and skills development

## 7. ACTIONS AND NEXT STEPS

- 7.1 The LAEP is intended to function as a live, evidence base and will need periodic updating to reflect shifts in policy, changes in local growth trajectories and emerging market trends in technology uptake. Ongoing work will therefore be required to ensure the plan remains current, robust and aligned with Huntingdonshire's and the wider county's ambitions.

7.2 Following approval of the CPCA's Local Growth Plan (LGP) in December 2025, several areas for further development have already been identified, which will affect all geographies in the Cambridgeshire area:

- **Enhanced geospatial assessment of growth areas:** more detailed spatial modelling will be undertaken for the LGP's identified opportunity zones and for major development locations emerging through district Local Plans. This will provide a finer-grained understanding of local energy needs at key growth sites. This work is already programmed for delivery within the current calendar year, supported by remaining funding from the original LAEP commission.
- **Reflecting higher aspirational growth needs:** while the LAEP incorporates the LGP's 'doubling of growth' core ambition, the subsequent Mayoral aspiration to 'triple gross value added' was announced too late to be integrated. Future integrations of the LAEP may therefore require further modelling to test and accommodate these higher-growth scenarios.
- **Establishing long-term governance and resourcing:** in the context of the 2024 Devolution White Paper proposals, there is a need to confirm how the LAEP will be governed, maintained and resourced over time. This ensures it remains an up-to-date and credible evidence base for regional and national submissions.
- **Meeting national data requirements:** UKPN currently requests updated datasets from local and strategic authorities twice each year, which aligns with their 5-year investment cycles. NESO is expected to establish similar data-collection processes. It will be important to ensure local authorities can respond consistently and effectively – despite these activities not being currently resourced – will be critical to maintaining the LAEP's value.

## 8. LINK TO THE CORPORATE PLAN, LOCAL PLAN, PLACE STRATEGY (HUNTINGDONSHIRE FUTURES) AND CLIMATE STRATEGIES

8.1 Corporate Plan: [Corporate Plan](#)

8.2 Local Plan Draft: [Preferred Options Draft Local Plan to 2046](#)

8.3 Place Strategy: [Place Strategy - Appendix 3.pdf](#)

8.4 Climate Strategy: [Climate Strategy Appendix 1](#)

Document E: Renewable Energy Assessment: [Document E Renewable Energy](#)

8.5

## 9. LEGAL IMPLICATIONS

9.1 N/A

## 10. RESOURCE IMPLICATIONS

10.1 It is anticipated that a significant proportion of this work can be delivered in house and officers across the partner authorities in the steering group shall remain in collaboration to continue this work.

## **11. HEALTH IMPLICATIONS**

- 11.1 The LAEP is an evidence base so currently does not directly deliver public health outcomes but is a key enabler of activities that do.

## **12. ENVIRONMENT AND CLIMATE CHANGE IMPLICATIONS**

- 12.1 The LAEP advances environmental and climate goals by converting national and local targets into a detailed, location-specific plan. It sets out the most cost-effective interventions needed across heating, transport, buildings, energy infrastructure and local energy generation. Through whole system modelling and high-quality data, it identifies what changes are required, where and when they should occur and who needs to deliver them. This supports more focussed investment decisions, better coordination of infrastructure improvements and clearer prioritisation of immediate actions.

## **13. REASONS FOR THE RECOMMENDED DECISIONS**

- 13.1 The LAEP aligns strongly with HDC's Place, Climate and Corporate Plan priorities, ensuring coordinated local action. Reviewing the Cambridgeshire LAEP allows members to influence a shared, evidence-based approach to decarbonisation, while provisional endorsement offers a clear framework to guide retrofit and wider asset decarbonisation. Endorsing the LAEP as an evidence base also strengthens Huntingdonshire's position to secure future external funding by demonstrating a robust, data-driven foundation as we move toward LGR.

## **14. LIST OF APPENDICES INCLUDED**

Appendix 1 – Briefing Summary Document

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## Appendix 1: LAEP Briefing Note

### Purpose

The Cambridgeshire Local Area Energy Plan (LAEP) provides a comprehensive, evidence-based roadmap for achieving net zero carbon by 2045 while supporting sustainable, economic growth.

It aims to:

- Identify the most effective interventions across buildings, transport, local generation and industry
- Ensure energy infrastructure keeps at pace with growth, including major housing and employment expansion
- Provide a shared, country-wide strategic framework enabling coordinated investment, policy alignment and spatial planning
- Act as a live evidence base for Local Plans, the Local Growth Plan, Distribution Network Operator (UKPN) planning and community energy initiatives

The LAEP models 4 scenarios:

1. Counterfactual – business as usual i.e. does not reach net zero
2. Electric engagement – rapid electrification driven by high consumer uptake
3. Hydrogen evolution – hydrogen for hard-to-electrify sectors (not including buildings)
4. Holistic transition (preferred) – a balanced mix of electrification, heat networks and system change, aiming to deliver net zero the quickest

The LAEP provides Huntingdonshire with:

- A clear, evidence-based plan to transition to net zero whilst supporting growth
- Priority status for electricity network reinforcement, especially at Huntingdon
- Opportunities to lead the county in district heating, industrial decarbonisation, EV infrastructure and community energy
- A defensible framework to secure external funding (UK Power Network - UKPN, National Energy Systems Operator - NESO, DESNZ, Local Electric Vehicle Infrastructure - LEVI, CPCA)
- Tools to reduce inequality, address fuel poverty and deliver healthier, more resilient homes

### Document Summary

Across Cambridgeshire emissions have fallen 35% since 2005 mainly from grid decarbonisation. Transport emissions remain high and static. Gas heating still dominates, electronic vehicle (EV) uptake is slow and building stock is older and inefficient. Huntingdonshire has high transport emissions, a large industrial/commercial base and over 6,700 fuel-poor households.

The LAEP identifies targeted interventions in:

Energy efficiency
Low-carbon heating
Industrial decarbonisation
Transport electrification and modal shift
Local renewable generation
Grid capacity, storage and system flexibility

### Economic Assessment

To achieve net zero, an estimated £2.7-3.4bn additional CAPEX beyond business-as-usual is required. The preferred holistic transition generates:

£3.5bn carbon benefits	£1.2bn bill savings	£5.7bn gross value added to 2045
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The delivery approach to achieve this is via a sequenced, phased roadmap (short, medium and long-term) supported by:



### Report deep-dive summary: Chapters 10, 11 and 13

Each District Council was asked to comment on the following Chapters which have been summarised below:

- Chapter 10 – networks, storage and flexibility
- Chapter 11 – system wide results: carbon and energy
- Chapter 13 – implementing the plan

### Chapter 10 - networks, storage and flexibility

This chapter assesses:

- Existing electrical network constraints
- Demand growth impacts using UK Power Networks (UKPN) Distribution Future Energy Solutions (DFES) modelling
- How heat pumps, EVs and new development will increase load to the grid
- When and where substations will run out of capacity
- Options for reinforcement and system flexibility, such as battery storage and smart controls

#### Key findings:

- Under all net zero scenarios, substation headroom becomes negative by the late 2030s without proactive upgrades
- Electrification of heat and transport significantly increases After Diversity Maximum Demand (ADMD)
- Growth itself (housing and employment space) is as large a driver of electrical demand as decarbonisation technologies
- Some primary substations show pressure *earlier* under high-growth sensitivity testing

#### Implications for Huntingdonshire:

- HDC hosts major growth areas, such as Alconbury and St Neots, which means earlier and more significant grid upgrades that will be required locally
- The 'Huntingdon' substation is identified in network growth modelling as showing material ADMD increases, unlike most other Huntingdon substations, which signals early constraints

#### HDC will need to coordinate with UKPN and NESO to ensure:

- Timely reinforcement of primary substations
- Capacity for industrial electrification (Huntingdon has significant industrial clusters)
- Integration of low-carbon technologies in new developments

#### HDC will have opportunities to influence:

- Strategic siting of energy-intensive developments e.g. data centres
- Local flexibility markets and neighbourhood-level storage
- Community energy and solar-plus-storage schemes

### Chapter 11 – System-wide Results: Carbon and Energy

#### This chapter covers:

- Total emissions reduction under each scenario
- Energy consumption shifts from gas to electricity
- Sector-by-sector impacts (domestics, non-domestic, industry and transport)
- Comparison of scenarios and identification of the preferred pathway

#### Key findings (scenario based):

- Only the holistic transition meets the county's 2045 net zero target.
- Emissions can fall sharply in the 2030s due to: heat pump rollout, EV transition, grid decarbonisation, heat networks in population dense areas
- Transport and domestic heating are the largest contributors to emissions reduction
- Annual electricity use rises substantially by 2045 so gas demand collapses

#### Implications for Huntingdonshire:

- Huntingdonshire's large transport emissions means it would benefit from county-wide EV uptake

- It also has:
  - High numbers of EPC properties rated D and E
  - Significant off-gas rural areas
  - Large industrial estates

HDC can leverage these results to:

- Prioritise fabric upgrades and heat pumps where carbon savings are greatest
- Target transport decarbonisation in St Ives, St Neots and Huntingdon i.e. areas with high commuting and car dependency
- Accelerate local renewables to reduce imported electricity and improve resilience

Chapter 13 – implementing the plan

Short term (2025-2030)	Medium term (2030-2035)	Long term (2035-2045)
<ul style="list-style-type: none"> <li>• Rapid scale-up of heat pumps and building retrofit in social housing and fuel-poor areas</li> <li>• Rollout of on-street EV charging in high-demand areas</li> <li>• Feasibility and piloting of district heating</li> <li>• Targeted industrial engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Major network upgrades</li> <li>• Expansion of district heating zones</li> <li>• Large-scale rooftop solar and storage</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of industrial fuel switching (electricity/hydrogen)</li> <li>• Final push to replace residual gas heating</li> <li>• Full flexibility integration into the grid</li> </ul>

Spatial Focus Zones	Risks and Mitigation
<ul style="list-style-type: none"> <li>• Fuel poverty hotspots</li> <li>• Grid constraint zones</li> <li>• Heat network opportunity areas</li> <li>• Industrial decarbonisation clusters</li> </ul>	<ul style="list-style-type: none"> <li>• National policy delays (e.g. boiler bans)</li> <li>• Supply chain shortages</li> <li>• Network upgrade lag</li> <li>• Public perception barriers</li> <li>• Equity gaps in EV/heat pump transition</li> </ul>

Short-term wins	Medium-term opportunities	Long-term positioning	Strategic advantages
<ul style="list-style-type: none"> <li>• Focus on fuel poverty interventions in parts of Huntingdon, St Ives, Ramsey</li> <li>• Target retrofit and heat pump programmes in areas with high EPC D/E concentrations</li> <li>• Begin industrial decarbonisation partnerships in St Neots and Huntingdon</li> <li>• Identify priority EV charging zones (urban areas and estates with low off-street parking)</li> </ul>	<ul style="list-style-type: none"> <li>• Advocate for and coordinate major network reinforcement for the Huntingdon primary substation cluster</li> <li>• Support development of heat network opportunities around Huntingdon town centre and St Neots (as identified in DESNZ zoning work)</li> </ul>	<ul style="list-style-type: none"> <li>• Use business park clusters (e.g. North Huntingdon) to develop shared energy hubs which will lead to local generation + storage + heat networks</li> <li>• Position HDC as a leader on industrial decarbonisation by facilitating hydrogen/electricity infrastructure uplift</li> </ul>	<ul style="list-style-type: none"> <li>• Strong alignment with HDC's growth areas – ensuring that energy infrastructure keeps pace, enhances deliverability of Local Plan housing, and employment targets</li> <li>• Opportunity to reduce cost pressures on businesses by enabling efficient electrification</li> <li>• Improvement of social outcomes through targeted retrofit, reduced fuel poverty and cleaner air</li> </ul>