

Lancaster District Local Area Energy Plan (LAEP)

22 October 2024

Report of Chief Officer - Planning and Climate Change

PURPOSE OF REPORT			
To seek adoption of the Lancaster District Local Area Energy Plan			
Key Decision	<input checked="" type="checkbox"/>	Non-Key Decision	Referral from Cabinet Member
Date of notice of forthcoming key decision	13 September 2024		

RECOMMENDATIONS OF COUNCILLOR PAUL STUBBINS

- (1) To formally adopt the Local Area Energy Plan to provide the necessary high-level strategic direction for the Council's wider strategy for net zero energy transition for the Lancaster District.
- (2) Following adoption of the LAEP, to subsequently task officers with exploring detailed delivery plan options, and to report these back to Cabinet for consideration.

1.0 Introduction

- 1.1 In 2019, the City Council declared a climate emergency with an ambition of reaching net zero by 2030 while supporting other individuals, businesses and organisations across the district to reach the same goal.
- 1.2 Whilst the Council has a target date commitment to net zero for its own corporate emissions by 2030, the Council has not yet set a target year for the wider district. It is important to do so; the Government's 2021 Net Zero Strategy estimates that 82% of the UK's emissions are "within the scope of influence of local authorities". As such, the most responsible and forward-thinking local authorities are leading the way in terms of setting a long-term vision for energy decarbonisation within their own districts.
- 1.3 In June 2023, Energy Systems Catapult were appointed to work with relevant stakeholders and deliver a Local Area Energy Plan (LAEP) for the Lancaster District.
- 1.4 The LAEP aims to provide insights and an evidence base to enable a decision for the energy associated greenhouse gas emissions for the district. This LAEP builds on the

existing policies, strategies, and action plans that are relevant to the Lancaster District in pursuit of climate, net zero, energy ambitions and statutory duties.

- 1.5 The LAEP sets out the changes required to transition an area's energy system and built environment to net zero, detailing what changes are required, where, when and by whom. It also provides a high-level overview of the likely scale of investment that will be required to achieve net zero. The LAEP also identifies a series of priority projects that can deliver immediate progress and decarbonisation impact.
- 1.6 The LAEP was completed on 4 October 2024 and it sets out an ambitious roadmap to net zero. This report recommends that the LAEP be formally adopted, and that officers subsequently begin to create a Delivery Plan, which would then be reported back to cabinet for further consideration.

2.0 LAEP – Summary of Outcomes

- 2.1 The LAEP details the scale and cost of the key interventions that are needed to deliver the transition to net zero in the Lancaster District. These include building fabric upgrades, low carbon heating, electric vehicle infrastructure, local renewable generation and energy networks.
- 2.2 Scenario modelling provides a vision of the future energy system and is a common approach to establish an optimal Pathway for a local area. For the Lancaster District, four scenarios were modelled:
 - (i) The 'Do Nothing' scenario;
 - (ii) Aim to achieve Net Zero by 2050;
 - (iii) Aim to achieve Net Zero via 'Local Innovation' by 2040;
 - (iv) Aim to achieve Net Zero via an 'Accelerated' route, by 2035.

The LAEP explores and models all of these scenarios in greater detail. It discounted scenario (i) on the basis that it would be irresponsible to fail to explore actions beyond those already committed. Progress towards decarbonisation would be piecemeal and peripheral and would fail to achieve the net zero ambitions that the Council has previously established. There are also significant costs associated with doing nothing, in terms of the need to maintain and upgrade existing infrastructure.

- 2.3 In respect of the remaining options (ii – iv), the draft LAEP attached to this report explains how these were modelled and evaluated, taking into account practicalities, energy demand, emissions targets and trajectories, and costs. Based on these scenarios, a final pathway has been devised to deliver net zero energy system for Lancaster District by 2040 (the 'Local Innovation' scenario). To achieve this pathway, the following interventions would be required:
- 2.4 **Domestic Fabric Upgrades:** 38,000 domestic properties (approximately 54% of all buildings) are recommended to be retrofitted with four main fabric upgrade measures. This includes: 14,000 cavity wall insulation measures; 22,000 – 26,000 loft insulation measures; 2,400 – 6,800 solid wall insulation measures; and 2,000 – 2,700 single glazing window replacements.
- 2.5 **Low Carbon Heating:** The most cost-effective net zero pathway is dominated by heat

pumps with 52,000 – 65,000 homes having heat pumps installed and approximately 75% of non-domestic building floorspace being heated by heat pumps in the future. The Net Zero transition allows smaller but equally important roles played by District Heat Networks and the emergence of clean gas – the latter primarily supporting non-domestic buildings.

- 2.6 **Electric Vehicle (EV) Charge Points:** The LAEP recognises the need to make public EV charging an inclusive resource across the Lancaster District. Modelling estimates that approximately 55% of households across the district will have access to an EV charger. The LAEP recommends the deployment of up to 1,250 public charge points to plug the gaps where residents do not have off-street parking.
- 2.7 **Local Renewable Generation:** The district has a significant opportunity to generate renewable energy locally from solar PV and onshore wind. Up to 575 GWh of annual generation is recommended as a cost-effective install by 2040. To provide an inset for residual emissions from hard to decarbonise energy demand, a further 1,400 GWh would be required.
- 2.8 **Energy Networks:** The plan illustrates the importance of investment in the electricity network to ensure there is capacity for the rapid growth of low carbon technologies. Electricity North-West has expressed a commitment to support transition to Net Zero and work with the district on priority projects. Opportunities for re-purposing the gas network appear to be limited, however several hard to decarbonise industrial and commercial sites may create a demand from clean gas in the future.

3.0 LAEP – Exploring the Options

- 3.1 Should the LAEP be formally adopted, the Council will need to precisely determine its wider role. As part of this officers will proactively engage with the comparatively few local authorities that have already progressed beyond the development of a Plan, in order to better understand the next steps. Areas of consideration would include resources, collaboration and partnerships, preparation, skills, key decisions, planning, policy engagement, investment, detailed design, business models and tracking methods for implementation.
- 3.2 Until the LAEP is adopted there is no fixed view on how the programme of work described in 3.1 above should evolve. However, it is likely that a LAEP Delivery Group will be formed with a mandate to focus on the Delivery Plan. Other workstreams could include ongoing work with the Distribution Network Operator (ENWL); the commissioning of further feasibility studies and outline business cases; the development of site decarbonisation plans for non-domestic buildings; and the quantifying of the skills gap for delivery. Other post-adoption key decisions will need to be made, including certainty regarding the scale of ambition; trade capacity; and the mix of renewable generation, including options to “net off” residual emissions.
- 3.3 To kick start the Council’s journey, three smaller pilot projects have been identified for near-term implementation and to provide measurable impacts against the district’s decarbonisation ambitions. These have been declared ‘Outline Priority Projects.’ Their commencement does not compromise decision-making regarding the LAEP.
- 3.4 The three Outline Priority Projects currently in progress are:
- (i) An electric vehicle charge point strategy;

- (ii) An onshore-wind turbine feasibility assessment; and,
- (iii) A solar PV and battery storage project.

Officers intend to complete work regarding the above by March 2025. It is expected that the charge point and wind turbine feasibility assessment will lead to business cases and investment decisions in 2025/26.

3.5 The LAEP is expected to provide an appropriate evidence base for any future funding opportunities; however significant funding gaps are expected, and additional resource may be required. This will need to be considered and factored into any post-LAEP work.

4.0 Details of Consultation

4.1 The development of the LAEP has been overseen by a steering group formed of Lancaster City Council as the lead organisation, Electricity North-West Ltd, Cadent Gas, Lancashire County Council and United Utilities.

4.2 The steering group has been instrumental in shaping the LAEP by being accountable for decision making, supporting data gathering, providing local context and characteristics, defining modelling scenarios, examining assumptions and reviewing the LAEP.

4.3 Further support was provided by key local stakeholders who also contributed to the decision-making process, data gathering and understanding the local context and characteristics.

	Option 1: Adopt LAEP and task officers to explore a Delivery Plan	Option 2: Do not adopt the LAEP
Advantages	<p>The LAEP can help the Council shape future Net Zero policies, strategies and guide efforts locally.</p> <p>It provides high-level cost estimates for large-scale energy decarbonisation and may be used to support any future funding opportunities.</p> <p>The LAEP provides a series of interventions needed to deliver Net Zero and allows the Council to better appreciate the pace and scale it needs to work at to deliver a 2040 target.</p> <p>Adoption of the LAEP and delivering the next phase of work will allow the Council to review delivery models, determine its future role and confirm ambition and appetite.</p>	<p>A decision to not adopt the LAEP (and the subsequent Delivery Plan work) has little benefit. The only advantage would be that there would be no additional resource or funding requirements.</p>
Disadvantages	<p>The LAEP has quantified the investment needed to reach net</p>	<p>The Council has ambitions to support the net zero transition for</p>

	<p>zero and there will be significant costs, which at this stage cannot be fully evaluated.</p> <p>Current officer capacity is fully allocated on delivering the Council's own Net Zero 2030 target for Scope 1 emissions. Depending on the delivery vehicle chosen, additional resource in the longer-term may be needed to deliver the recommendations of the LAEP.</p>	<p>other businesses, individuals and organisations across the district. This cannot be done effectively without a comprehensive energy decarbonisation strategy.</p> <p>The LAEP may act as an evidence base for future external funding opportunities. These may be missed if not adopted and resourced.</p>
Risks	<p>There are no direct risks arising from a decision to adopt the LAEP. Any risks will be associated with the costs of delivering (and resourcing) individual projects, which will be separately assessed as part of the eventual Delivery Plan. It will be for Cabinet to determine, on the basis of the more detailed work that follows, how to proceed with implementation.</p>	<p>There is a considerable risk that the absence of a LAEP will result in missed opportunities for financial funding (should opportunities arise).</p> <p>There is also reputational risk to the local authority for failure to advance proposals for decarbonising the district.</p> <p>The reputational risk pales into insignificance alongside the risks to residents and businesses within the district if the impacts of climate change cannot be mitigated. The LAEP is an example of how one district can make a difference.</p>

5.0 Officer Preferred Option (and comments)

- 5.1 To adopt the LAEP, inform the Council's wider strategies and to task officers with exploring a Delivery Plan for implementation.

6.0 Conclusion

- 6.1 The LAEP model identifies the most cost-effective and integrated plan for the Council to contribute to timebound national and local Net Zero targets whilst maximising co-benefits to society. The work required is significant, but the LAEP provides the Council with a clear and well-defined roadmap to enable it to make a start on reducing district energy emissions.
- 6.2 In choosing to adopt the LAEP, Cabinet will acknowledge the challenges, particularly regarding cost and scale, that will support the level of ambition. Resources will need to match these ambitions to enable delivery of the plan. External funding and private investment will inevitably be required to deliver capital projects to support residents and the wider community.
- 6.3 Ongoing partnership with the key LAEP stakeholders will be essential to ensure plans

are aligned and priority projects agreed.

- 6.4 Following any decision to adopt, officers will report back to cabinet once detailed Delivery Plan work is completed.

RELATIONSHIP TO POLICY FRAMEWORK

Council Plan

The adoption of the LAEP supports the themes within the Council Plan, particularly for the Council to be net zero carbon by 2030 while supporting other individuals, businesses, and organisations across the district to reach the same goal.

Planning & Climate Change Service Business Plan 2024-2025

The objectives of the report directly support and complement the Service Business Plan objectives which mirror the ambitions in the Council Plan, most notably 1.1 (Carbon Zero), 1.2 (Sustainable Energy), and 4.2 (Partnership).

CONCLUSION OF IMPACT ASSESSMENT

(including Health & Safety, Equality & Diversity, Human Rights, Community Safety, HR, Sustainability and Rural Proofing)

The adoption of the LAEP itself does not immediately impact upon the sectors listed above. However the identification of priorities via a subsequent Delivery Plan is envisaged to have a positive impact in ensuring a more just net zero energy transition.

LEGAL IMPLICATIONS

There are no legal implications stemming from this report.

FINANCIAL IMPLICATIONS

There are no direct financial implications arising directly from this report. Should the plan be adopted any subsequent future decisions required will be subject to further reports to Cabinet and future implications will be considered at that time.

All officer time required to formulate the delivery plan can be managed from within existing resources. However, it should be noted that dependent on future decisions, additional resources may be required. Again, this would be presented to Cabinet at the appropriate time.

SECTION 151 OFFICER'S COMMENTS

The s151 Officer has been consulted and would draw Members attention to the comments presented within the Financial Implications

MONITORING OFFICER'S COMMENTS

The Monitoring Officer has been consulted and has no further comments, noting that further reports will be required for any decisions taken in accordance with the LAEP

BACKGROUND PAPERS

[Lancaster District Local Area Energy Plan](#)

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