LOCAL AREA ENERGY PLAN

CATAPULT Energy Systems

Local Area Energy Planning:

The Time and Place is Now

Empowering local action on the road to Net Zero

September 2023

Contents

Foreword

Success in the next phase of decarbonisation will, to a large extent, depend on whether people and local communities support the major changes in how they get their energy. As we move on from the incredible progress greening the UK's electricity system to the trickier challenges of decarbonising buildings and transport, we will need to be much more sensitive to the particular characteristics of local areas. Local matters.

Energy Systems Catapult, with Innovate UK support, has been instrumental in developing the concept of Local Area Energy Planning over the past 8 years to meet that challenge. Since its conception, we have been joined by a wide range of local authorities and regional leaders, in developing and testing the approach. More than 66 councils across the UK have now adopted or are developing a Local Area Energy Plan (LAEP). It is becoming a key tool for translating national ambition into local action.

Local Area Energy Planning is also gaining traction among policymakers in local, regional, and UK government, and is being referenced by Ofgem, by planners, and by energy network operators. A range of companies including Arup, Buro Happold, and City Science have begun delivering LAEPs in response to increasing demand.

Other organisations have also been crucial in driving the broader agenda forward, including Regen, UK100, and the Centre for Sustainable Energy. Exciting innovators are piling into the new LAEP market, such as Advanced Infrastructure, who are building data visualisation tools. All of this has been crucial to turn a Local Area Energy Plan from an idea on a slide, to the kind of practical delivery and innovation we are seeing. And we are not standing still. The feedback from the local areas who have pioneered the approach is helping us evolve and improve the tools, methods, concepts, and models to deliver greater impact from Local Area Energy Planning at regional and national scales (as well as building new supporting tools, like Net Zero Go).

Above all, Local Area Energy Planning is about creating a way for local people and communities to own the transition. Robust data and modelling are essential, but insufficient. They are tools to enable people to explore, test and design the future energy system in their area.

LAEPs are already helping to inform investment, secure funding and foster collaboration. Just look at what is being achieved in Wales, where I'm delighted that the Catapult is providing advisory support to the Welsh Government in scaling up plans to create a National Energy Plan by 2024. I believe that with a similar commitment to Local Area Energy Planning across all of the UK's nations, the plans could play a huge role in clarifying local priorities and galvanising action, investment and innovation at local and regional level. Without it, reaching Net Zero will be much, much harder.

This report outlines the current landscape around Local Area Energy Planning, it paints a picture of the future and includes our hopes as well as urgent recommendations. These include UK government adopting the Local Area Energy Planning process as a consistent national model for whole systems place-based energy planning exercises, aligning it to funding opportunities to increase the value of the plans, reducing uncertainty, and ensuring all places are supported. Integrated and strategic actionable plans to deliver Net Zero, in time and at least cost, help lower risk and enable delivery at scale. If we are to decarbonise our energy system effectively in a way that works for local areas, we need to accelerate Local Area Energy Planning now, and do it consistently nationwide.

Guy Newey,
CEO Energy Systems Catapult

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Prologue

There is a huge urgency to take action on Net Zero, a place-based whole energy systems approach is needed now. Local Area Energy Planning robustly addresses this need and is designed to accelerate the journey to Net Zero, by providing areas with a plan to deliver on national and local targets in time and at best cost.

Places are taking action each day, many undertaking LAEPs whilst others are in danger of being left behind. With no nationally adopted model for place-based whole energy systems planning, there is a lack of consistency, coordination, and risk of duplicative cost. An absence of local plans which help ensure the right Net Zero projects happen in the right place at the right time could lead to inefficient and uncoordinated investment, stranded assets, and could drive up consumer bills.

Places should not slow down in delivering projects, but immediate action is needed to secure adoption of consistent whole energy systems plans to guide delivery of Net Zero on time and at least cost. Local Area Energy Planning provides the framework through which to achieve this, and to get local areas started on developing the depth of understanding needed to tackle Net Zero effectively and efficiently.

Executive Summary

Local Area Energy Planning is a integrated planning approach designed to define detailed place-based whole energy systems pathways and delivery plans for Net Zero. The process is set out in the Guidance for Creating a Local Area Energy Plan (LAEP)[1] produced by Energy Systems Catapult with Innovate UK support.

To meet our Net Zero targets we need local action, carried out in a strategic, cost-effective way, backed by significant investment. Local Area Energy Planning can coordinate, quantify and de-risk that investment at scale and has now been, or is being, undertaken by 66 councils in the UK as of September 2023. Progress is gathering pace: only 15 Local Area Energy Plans had been completed or were underway by the end of 2021.

Ensuring and supporting the development of Local Area Energy Plans (LAEPs) led by local councils within a defined framework, will provide the platform needed for them to shape the energy transition. A nationally endorsed and supported approach, including funding and guidance, would empower local authorities to convene and lead Local Area Energy Planning, and reap the benefits of delivering a Net Zero whole energy system in a co-ordinated and localised way. This approach would also deliver a key part of the CCC's recommendation to establish 'a clear process and governance framework for energy planning across national, regional and local levels'[2] .

It is not enough to focus on policy in one arena. Alignment between spatial and energy planning, and the involvement of local communities, is critical and can be facilitated by LAEPs. This should help to lay the groundwork for changes to the institutional landscape e.g. proposals by Ofgem for Regional Systems Planners[3].

To get to Net Zero, we need to urgently act. The time for a place-based approach is now – there is huge potential to develop local energy resources and skills. Some areas are racing ahead with LAEPs and realising the benefits, whilst others are in danger of being left behind[4] .

We have called for the approach to be endorsed and funded to ensure consistency, giving clear instruction on how local authorities can progress, and have time to deliver the plans, ahead of the Net Zero 2050 targets.

Even if the UK government decides it is too early to support delivery of full LAEPs, we believe urgent action is required to provide a consistent framework for places to utilise to build a robust understanding of local needs and demands. This would enable every local area to progress action consistently but at the level of depth and breadth it is ready for, eventually leading in to a full LAEP, as an integrated plan.

Our key recommendations are aimed at accelerating effective progress to Net Zero across the whole energy system, by hastening the adoption, consistency, and success of LAEPs across the UK:

- The LAEP guidance should be adopted and endorsed nationally as the framework for place-based whole energy system decarbonisation planning. Informing other public funding and ensuring consistency across the UK.
- Funding should be provided for all areas to undertake a full LAEP, or as a minimum, whole energy system baselining (following Stages 1-3 of the LAEP guidance[5]) within reasonable timescales.
- The process of Local Area Energy Planning should be embedded within the National Planning Policy Framework, and future network institutional and governance arrangements as a mechanism to consistently align spatial and energy systems planning (and to accelerate uptake of LAEPs, as shown in Wales).
- Consistency of the scope of data inputs should be established across the UK so that all plans are comparable. Output data use cases for Local Area Energy Planning should also be established, ensuring interoperability and to meet market demands for use in dynamic planning tools, and for ease of refresh and update.
- There needs to be investment in centralised consistent support to local authorities, built out from existing centres of excellence, to enable them to build the capabilities and capacity to deliver and implement LAEP.

We are seeing the value that having a data rich, stakeholder led and owned, and evidence-based plan is providing for local areas.

Local Area Energy planning has been progressing through an innovation cycle. More and more places and practitioners are using the repeatable guidance, demonstrating consolidation in the market and recognition of the value of integrated whole energy systems planning. However, despite this traction, a lack of national endorsement risks inconsistency and the confidence to meet ongoing needs such as driving down cost and enhancing functionality further.

We have been working to understand in detail the delivered cost of a LAEP, and to develop approaches to bring down this cost and support continued growth of the market. Based on this, we believe providing all areas in the UK with a LAEP, and supporting a central advisory function, would likely cost in the region of £40million dependant on scope. Funding only baselining activity, (Stages 1-3 of the LAEP guidance) would reduce this cost.

Further work would be needed to fully cost this, and to determine the best programmatic approach to a roll-out as a one-off funded exercise. Key considerations would include sequencing over time to build sustainable capacity within a supply chain of LAEP practitioners, and ensuring plans are suitable for efficient and effective continuous use. Significant learning can be taken from the approach to the roll-out of Local Area Energy Planning in Wales, and work on delivery of other planning exercises to date, particularly in regional programmes.

We are seeing the value that having a data rich, stakeholder led and owned, and evidence-based plan is providing for local areas. Crucially it's helping to de-risk and attract investment and deliver projects based on the outputs and pathways identified in an area's LAEP. We have worked with stakeholders to develop these recommendations which we believe can stimulate the action needed to develop local energy resources and skills while delivering Net Zero in a way that provides the greatest societal and economic benefits.

The time for Local Area Energy Planning is now. We hope this report will help continue that forward momentum and convince policy makers of the need for a national rollout of LAEPs.

Why now is the time to accelerate Local Area Energy Planning

The UK energy sector is facing unprecedented challenges and change. The energy crisis is driving the cost-of-living crisis, with over 3 million UK households being classed as in fuel poverty[6]. Alongside rising energy costs, the climate crisis, and UKs legislative commitment to reach Net Zero by 2050, this demonstrates the need for change. The CCC estimates that delivering Net Zero will require around £50 billion of low carbon investment every year from 2030 (up from around £10 billion in 2020), and energy security has taken on a renewed focus since the COVID-19 pandemic, and the conflict in Ukraine.

Whilst addressing these challenges comes with 'hassle and cost'; on the flip side, it offers huge potential for UK businesses offering relevant solutions and services to become established and grow, resulting in UK economic growth, exports, jobs, and safer, happier communities.

The role of local action by the people and places which make up the UK is critical in meeting these challenges, and tailoring solutions to local need. The 'Accelerating Net Zero Delivery' paper published by UKRI stated that applying a 'place-specific' approach to carbon reduction could lead to almost double the wider social benefits for a third of the investment compared to a 'place-agnostic' approach[7].

A means of identifying the optimum combination of local opportunities, leading, and coordinating action, is required to give confidence to decision makers, investors, project developers and other stakeholders central to achieving change and Net Zero targets. National policy can provide direction and drive sector progress to achieve this place-based coordination and investment.

Local Area Energy Planning is a specific integrated planning approach that has been designed to define detailed place-based whole energy systems pathways and delivery plans for Net Zero. It describes what needs to happen where and when, as set out in the detailed Guidance for Creating a Local Area Energy Plan produced by Energy Systems Catapult, with support from Innovate UK[8].

Over 82% of local authorities have declared climate emergencies across the UK (323/393 councils[9]) and many have announced Net Zero targets ahead of national ambition, but very few have detailed plans of how these targets will be achieved. Local authorities recognise their role in reducing the environmental impacts of their own estates and operations, but also in accelerating Net Zero delivery for the areas they serve.

Currently most energy system projects and investments are based on single asset types and do not take a whole energy system-based approach. For local areas to achieve Net Zero in the timescales required the infrastructure investment will need to include renewable generation, storage, building retrofit, network upgrades, heat, and transport infrastructure - all happening at the same time.

Coordination of activities between many different stakeholders (the public and private sectors, along with communities and individual consumers) who operate at different scales (from national to local) will be needed. This may increase the perceived and actual risks of projects, making the case for investment more challenging.

We need to support local authorities and investors to lower these risks as much as possible by reducing uncertainty and increasing confidence.

Local Area Energy Planning does this by providing quality, evidence based, long term plans, defining priority projects, and demonstrating how different projects can complement and integrate with the wider energy system.

Momentum has been rapidly building in the last few years in Local Area Energy Planning as a pioneering approach to support the UK to not only meet Net Zero targets on time and at best cost, but also to address wider issues such as energy security, enabling economic growth, and a Just Transition[10].

Places should not slow down in exploring immediate project opportunities. However now is the time to ensure they are supported, through coherent Local Area Energy Plans, to accelerate scaled investment and make big decisions confidently for the long term.

We need to support local authorities and investors to lower these risks as much as possible by reducing uncertainty and increasing confidence.

Key national documents have recognised the role of Local Area Energy Planning, whilst also calling for further guidance from UK government. A selection includes:

- Mission Zero: Independent Review of Net Zero by MP Chris Skidmore highlights that Local Area Energy Planning "is an area where more precise UK government guidance would be helpful."[11]
- The Committee on Climate Change advised that UK government needs to provide "clear guidance on who should be responsible for and involved in producing [local area energy] plans[12].
- UK100 Powers in Place[13] calls for a new Net Zero Local Powers Bill and Net Zero Delivery Framework that incorporates Local Area Energy Planning to unlock investment in low carbon decentralised energy.
- Finding common ground: Integrating data, science, and innovation for better use of land policy paper published May 2023, highlights there is a lack of understanding about how much land suitable for energy infrastructure is likely to be contested by landowners or through the planning system. LAEP is included as a case study that could be used to improve understanding of how land use and energy demands can inform planning decisions[14].
- Ofgem, in their Future of Local Energy Institutions and Governance consultation[15] have set out a proposal for Regional System Planners (RSPs) and that "local/regional government would remain responsible for local spatial planning activities and Local Area Energy Planning activities". This is currently in consultation phase, and it is undecided how planning activities should be delivered – i.e. who should be involved in producing the plans, and who should provide regional direction.
- In relation to the Ofgem consultation, Regen published research on local authority perspectives which included:
  - "Better support for Local Area Energy Planning now, which could form the basis of a regional plan later. The local authorities need resources to develop decarbonisation plans and to actively engage with the networks."
  - "More strategic engagement between local authorities and the networks, alongside better support for Local Area Energy Planning, would prevent inertia whilst new governance arrangements are developed."[16].

As of September 2023, Local Area Energy Planning has been adopted, or is currently being developed, by 66 councils across the UK with many others showing interest in the value that such a plan provides. Of these, 43 areas are in the process of a LAEP and 23 have completed one. An online map which highlights the areas can be found **here**. This compares to 15 LAEP's delivered by the end of 2021, demonstrating the increasing traction for the Local Area Energy Planning approach and the increasing commitment across local places to transition to Net Zero.

There is an urgent need to establish consistency to enable effective coordination and identification of robust opportunties at scale to attract and align the investment that is needed.

While progress has been made, and support has increased for example with devolved governments, there is still an absence of policy clarity and UK-wide support for Local Area Energy Planning. This risks uncertainty, inconsistency, and potentially exercises which do not deliver the required outcomes, for example more opportunistic project development which fails to consider whole energy system interactions, or exercises at an insufficient level of detail to identify projects. The result could be increased costs to reach Net Zero, investment in assets which will become stranded, lost opportunity to realise maximum social and economic benefit, and an inability to act or drive investment when and where it is needed most.

Local authorities have statutory responsibility for planning in other areas, and in other domains (such as transport and housing) place-based integrated planning is accepted as a critical discipline to ensure that significant long-term investment and policy decisions can be taken confidently, towards delivering optimum outcomes. The whole energy system however, despite being critical for achieving Net Zero and ensuring economic and societal prosperity, does not benefit from the same accepted need, enabled through policy, for clear and integrated planning.

Local Area Energy Planning offers the means to integrate planning in these other domains with energy infrastructure planning and Net Zero objectives, to further reduce risks, such as those related to network connections, future demand, and decarbonisation.

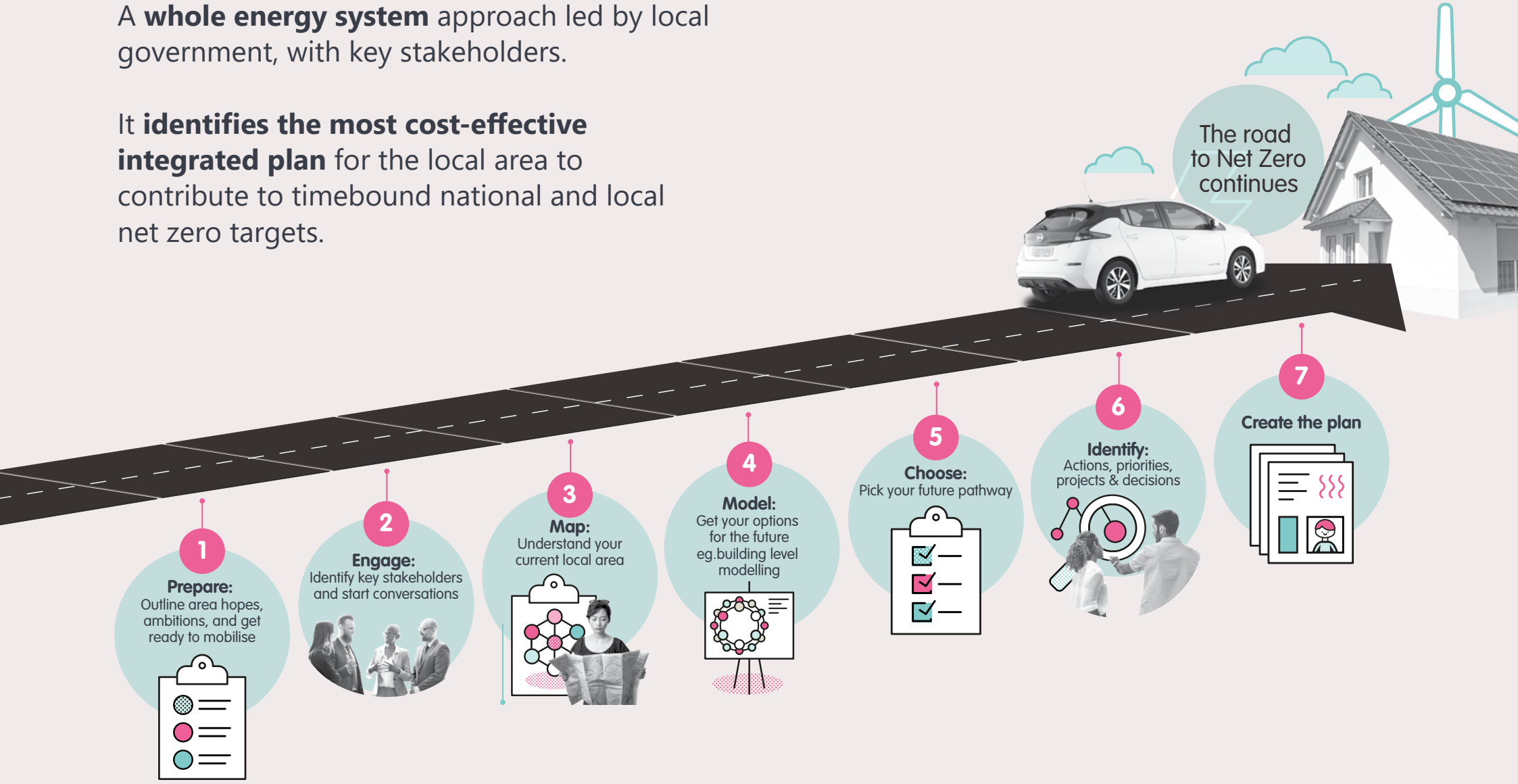
This Report is based on the impact we are already seeing being realised across areas that have been involved with Local Area Energy Planning. It outlines what we believe is critically needed in the immediate term to ensure places and communities can consistently benefit from Local Area Energy Planning, and that the market can confidently continue to develop the approach. For example innovating dynamic digital tools to enable LAEP implementation in new ways, and maximising cost effectiveness in delivery.

There is an urgent need to establish consistency to enable effective coordination and identification of robust opportunties at scale to attract and align the investment that's needed.

What is a Local Area Energy Plan?

A **whole energy system** approach led by local government, with key stakeholders.

It **identifies the most cost-effective integrated plan** for the local area to contribute to timebound national and local net zero targets.



What does Local Area Energy Planning deliver and how?

A localised whole energy systems roadmap to decarbonisation.

Visual plan highlighting suitable technologies.

An evidence-based investment plan.

Joined up current plans and policies.

Engaged political and community buy in.

Identify and enable wider area benefits.

A LAEP is created collaboratively between local government, energy network operators and other key local stakeholders.

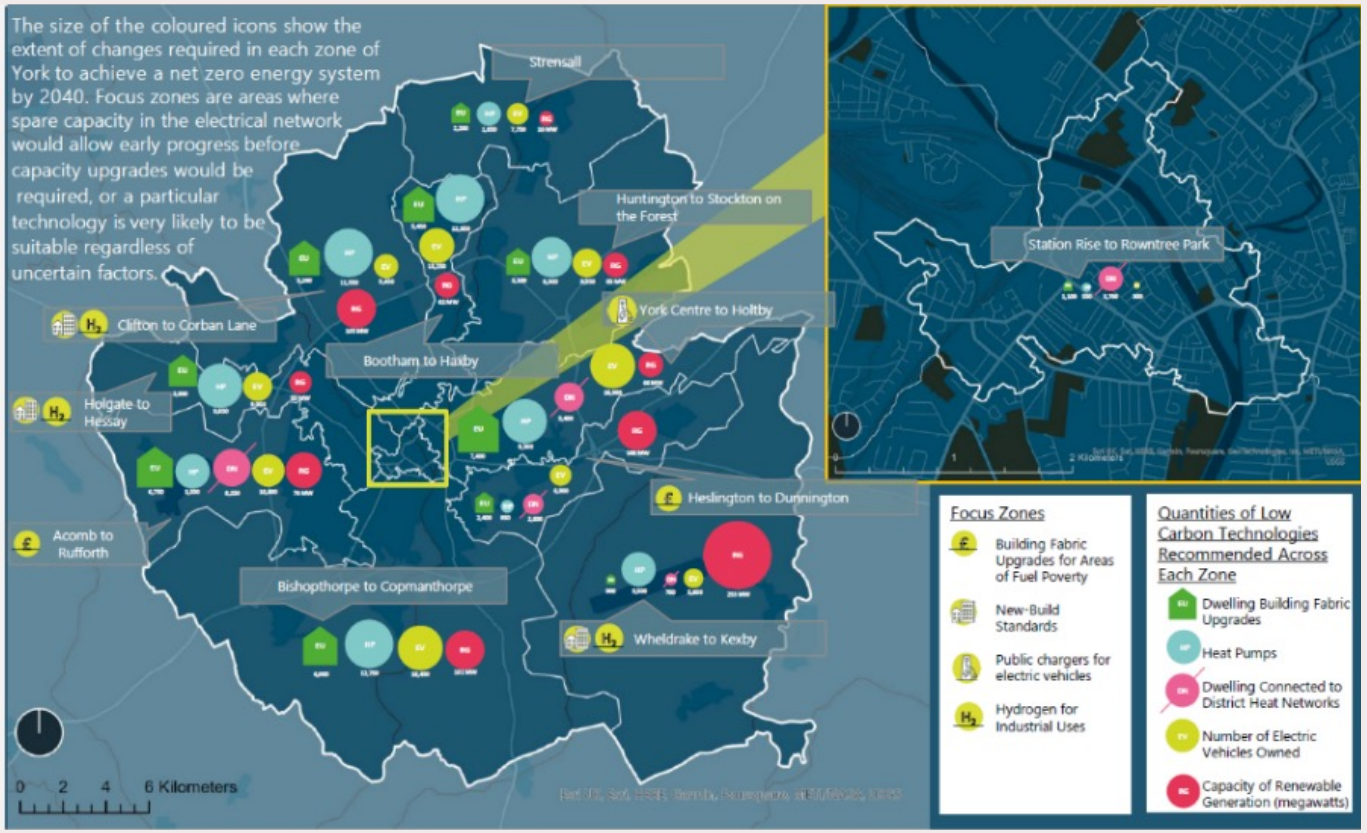
It provides an area with a level of detail equivalent to an outline design, resulting in a fully costed, spatial and visual plan, identifying the change that is needed to the local energy system and built environment.

A LAEP sets out the total costs of delivery, changes in energy use and emissions over incremental time periods in line with national and local Net Zero targets.

When done well, this provides the organisations who will invest in, and support the delivery of, an areas Net Zero transition with specific locational information. This includes such things as where energy network investment is required, and how many EV charge points should be installed and at what cost.

The scope of a LAEP addresses energy generation including electricity, gas and heat, the infrastructure needed including gas, electricity, heat, and potential hydrogen networks, energy storage, and demand, including transport, domestic, commercial, and industrial use at a local level.

Critically, rather than more opportunistic identification of individual projects, a LAEP provides an organised plan, at building level, to deliver on a Net Zero plan. This includes the size of investment required in different asset types, and confidence they are the right mix of interventions from a whole energy systems perspective.



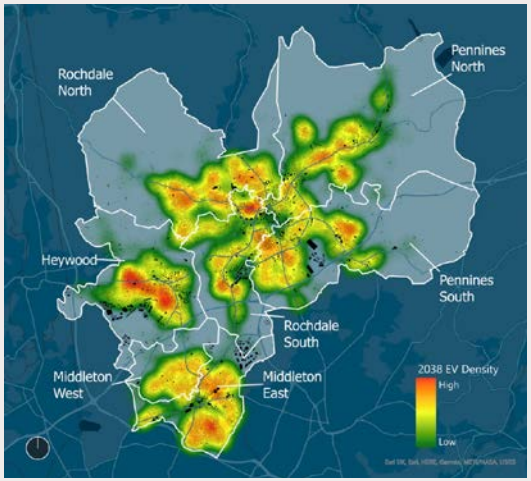
An example LAEP 'Plan on a Page' output summarising priority projects across a local area that can be used to demonstrate opportunities to stakeholders and support engagement

It currently does not provide an area with a complete Net Zero plan however, and out of scope emissions (for example agriculture) will currently need to be considered separately (either at a local or national level) – see Annex 2: Standard Data Inputs and Assumptions for Local Area Energy Planning for more information[17].

The approach is based on local area characteristics and needs. It not only provides a detailed pathway for an area to reach Net Zero, but also incorporates and evaluates a range of local benefits that can be achieved from the different ways of decarbonising a place. Local priorities and socio-economic opportunities are explored, and analysis is completed to define what outputs are most suitable.

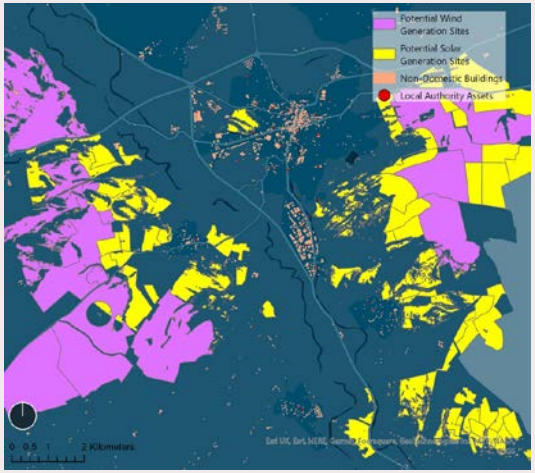
The preferred long-term pathway for Net Zero incorporates the views and preferences of the local stakeholders to identify near term and low regret projects, as well as longer term interventions.

Focus zones with a concentration of near-term project opportunities are identified, including the sequencing of interventions, key decision points, and priority projects within more immediate influence or that are more likely to be investable in the short term.

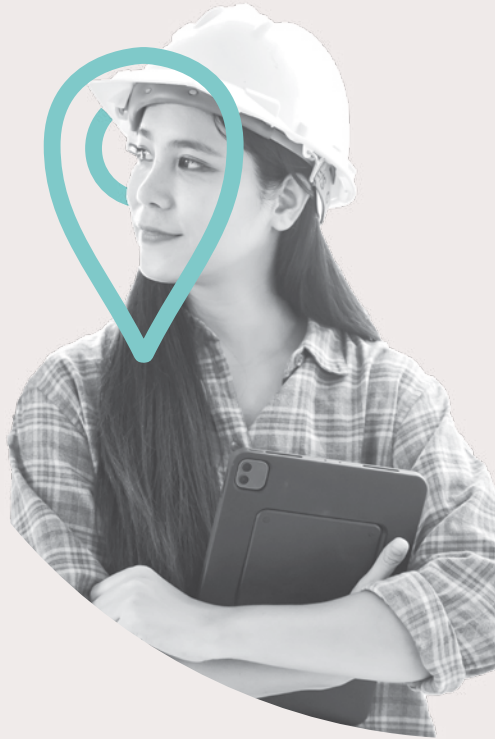


An example LAEP output showing an aggregated view of where the highest density of EVs and charging infrastructure is needed to help demonstrate to LAs and stakeholders what projects are likely to deliver the greatest value for money and deliver what people are likely to need.

An example LAEP output showing what heating system is most appropriate for domestic housing types which could help local authority with community engagement and applying for government funding for retrofit schemes.



An example LAEP output showing potential sites for wind and solar generation and their closeness to potential users such as non-domestic buildings and local authority assets to highlight potential project locations to local authority, developers and investors.



How a LAEP provides critical tools to coalesce decision makers and accelerate action and investment

In the Local Area Energy Planning process, stakeholders are brought together around a common understanding of priorities, allowing decisions to be made and investment to be de-risked at pace and scale.

To get on and deliver Net Zero now, low-regret, whole energy system questions need to be answered. For example:

- Are there any areas where heat pumps, hydrogen, or heat networks are a "low regret" choice for a place?
- Does the energy network need to be adapted, reinforced, or expanded, or should smart or flexible solutions be looked at?
- Where are the optimum locations to develop transport charging hubs?
- What cost effective building options are dependent on the other solutions they are combined with, and what is their impact on the energy system?

Stakeholders need to be brought together to make these decisions, aligning their priorities and influence to enable action and unlock delivery at scale.

Local areas with LAEPs have provided us with valuable feedback, insights and stories which have led to the following six key benefits being identified for how the plans are providing impact.

As plans are progressed further it is expected that even greater impact will be achieved as they are turned into reality with project development and investment realised.

Feedback from Local Authorities

"We have used LAEP to inform applications and business cases for other funding streams such as Home Upgrade Grants and LAD scheme applications."

"Having a trusted voice to demonstrate the extent of the work needed to reach Net Zero and having numbers on investment required has really helped the council put it into perspective".

"To prepare for a new council structure, the LAEP outputs have been used to provide evidence and scope near term activities relating to Net Zero with specific projects identified".

"The LAEP supports timely delivery of new housing and commercial development required for our area which has significant infrastructure challenges"

"Having this process enables you to have a much bigger picture for matching and aligning plans across departments."

"It took several months to get data required however the DNO and GNO have signed a charter to work together on LAEP, both with teams specifically to drive LAEP forward so there is clear enthusiasm and willingness there."

1. A place-based plan that enables whole energy systems coordination.

Many organisations are undertaking Net Zero planning and delivery activity in the same places including local government, social housing providers, transport operators, and energy network operators. This presents a challenge and could result in missed opportunities if activities are siloed and there isn't an understanding of how these fit alongside others.

To make decisions and reduce risk, **a key aspect of Local Area Energy Planning is to identify 'low regret' interventions**, specific to the local context. This doesn't mean avoiding the difficult decisions but making decisions on priority action collaboratively through a robust, evidence-based process.

'Low regret' means looking at various options for a place, and identifying interventions which must occur in a range of scenarios, and in the short term, to achieve Net Zero.

This also results in identifying where there are more uncertain decisions that can be re-assessed in the longer term. This is a central attribute of Local Area Energy Planning which isn't achievable in approaches which don't consider a range of future scenarios, and their uncertainty.

With a LAEP, the contribution of each project to the transition to Net Zero can be calculated and communicated to a wide range of stakeholders.

2. A spatially and temporally prioritised visual plan of suitable decarbonisation projects covering generation, demand, and energy infrastructure, supporting engagement and decision making.

A Local Area Energy Plan provides a detailed, visual and granular plan, outlining all of the interventions and the investment needed by energy system component and timeframe (what, where, how many, and when) e.g. building fabric retrofits, heating system changes (for both domestic and non-domestic buildings), energy system infrastructure (heat networks, energy networks and vehicle charging) and local energy generation and storage.

The plan provides evidence to inform project pipeline development and investment, prioritisation for full feasibility and sequencing of projects, and informs critical decision making by a range of local actors to drive delivery.

"The LAEP has given us greater insight into our area – its highlighted some fantastic opportunities that will be used for further feasibility studies, and also shown us what areas we are performing better than initially thought such as housing standards and insulation".

"The LAEP forms the high-level business case for discussions between Oldham Council and potential low carbon infrastructure investment and delivery commercial partners. The council has carried out market engagement on this basis to establish interest for an Oldham Green New Deal Delivery Partnership."

"The LAEP map has been used by retrofit colleagues to inform Home Upgrades Grant (HUG) applications and by the Electric Vehicle Infrastructure team developing proposals as part of the Local Electric Vehicle Infrastructure (LEVI) fund."

3. An evidence-based plan accelerating investment.

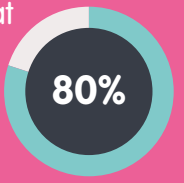
Local Area Energy Planning acts as an evidence base and key resource to support local areas to attract funding and investment. LAEPs highlight what activity is needed, supported by the required total investment across each component of the energy system. This is a powerful tool to engage and develop interest from private sector funders and developers.

The process to develop a LAEP also helps local councils to better prepare for public funding opportunities relating to Net Zero and means they can use this to leverage additional funding options.

As the plan is developed collaboratively with key stakeholders and based on a whole energy system approach, funders can also have increased confidence in the projects they are supporting as they are part of a coherent plan. This is an absolutely critical benefit of Local Area Energy Planning in enabling the scale and pace of investment needed to reach Net Zero in the UK.

"Being able to demonstrate how well we understand our area has been vital to securing further funding from both UK government programmes and commercial partners".

"We used the LAEP outputs to identify and accelerate our feasibility studies for EV infrastructure and solar project development across a local area and found that 80% were commercially viable opportunities for us."



"We are defining project pipeline for the pilot scheme with UK Infrastructure Bank (UKIB) and building programmes of work based around the LAEP outputs."

"The LAEP has been a key piece of strategic evidence and has been used across the council. No cabinet report hasn't mentioned it!"

"The plan has been identified as a key piece of evidence in the preparation of the Council's forthcoming strategic Local Plan, alongside a Green Infrastructure Strategy."

"Coordinating climate targets across a region is challenging and a portfolio of LAEPs will enable us to see where there is flexibility in the system for some areas to accelerate".

4. Joining up of current plans and policies.

Whilst all local areas have an ambition to achieve Net Zero, developing policy, taking big and strategic decisions, and setting out activity to achieve Net Zero is challenging without a detailed evidence base that sets out what needs to be done. **A Local Area Energy Plan provides this evidence base at a local level** and can be aggregated with others to develop regional views, strengthening the case for policy change needed to achieve Net Zero at UK government level.

There is a huge amount of Net Zero activity being pursued by local and regional government, and other agencies, including across transport, waste, housing, and the public estate to name a few that fall within local government jurisdiction. A holistic approach is needed to coordinate activity and to develop the local and regional governance arrangements for effective action, whilst also helping to establish roles, responsibilities and future focus areas.

How LAEPs in Greater Manchester have informed decision making

The LAEP work undertaken is powerful because it identifies not just the type of technologies that will be needed for this transition, but their scale, indicative locations, and costs.

Mark Atherton,
Director of Environment,
GMCA

5. Engaged political and community buy in through the planning process to support and accelerate the delivery.

Understanding local needs and undertaking local and community engagement is essential to facilitate Net Zero. Local and community groups can both inform the development of an area's LAEP but also use the LAEP to understand what aspects of a future and locally driven Net Zero energy system they could participate in e.g. through identifying community energy project opportunities.

Local Area Energy Planning is stakeholder led, and incorporates substantial market engagement, and practical development of important collaborations across primary energy system stakeholders (such as local authorities and network operators).

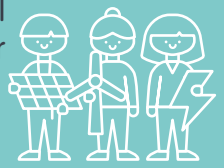
The engagement approach advocated by the LAEP guidance builds relationships across the area's key stakeholders; establishing initial partnership opportunities as well as exploring organisations interests in supporting the delivery of Net Zero. This can be used effectively as a basis to shape ongoing governance arrangements which allow subsequent delivery of the LAEP and coordinated Net Zero action and projects. By setting out a full breakdown of the interventions (e.g. number of EV charge points by area) and investment need, local areas can use their LAEP for activity such as an investment prospectus to explore public private partnership opportunities, and as an evidence base in support of market engagement and procurement activities.

A wide range of stakeholders can use the LAEP to determine what products, partnerships, and services they could offer and deliver to the area.

"The collaborative approach that has been taken to develop the Oldham LAEP with the Greater Manchester Combined Authority and our communities provides a framework that will help us to drive forward the attainment of our bold carbon neutrality targets of 2025 for the Council and 2030 for the borough."

"The LAEP has also been a key document to inform the Oldham Energy Futures project – a deep community engagement project leading to Community Led Energy Plans, setting out residents' vision for the future design of their neighbourhoods under the low carbon transition"

"We plan to use LAEP as part of an evaluation and appraisal of potential projects across our area to highlight priorities and support work with community energy groups."



"The team are being asked to present to senior officers across the council on the LAEP findings more and it has helped to raise the profile and prioritise Net Zero opportunities."

"We used the LAEP outputs as part of a Climate Debate with the community to introduce and discuss some potential decarbonisation options for our area.
The findings will be used to help develop a city-wide Climate Change Action Plan."

"Key benefit of LAEP is enabling local authorities to have a holistic view by setting out the process and guiding how best to do this and outlining why its important".

6. Identifying and enabling wider societal benefit

The process of developing a LAEP highlights opportunities that best meet wider socio-economic challenges such as health, fuel poverty and air quality to maximise the benefits of the Net Zero transition to a local area.

As the majority of LAEPs have been completed in the last 1-2 years, there is currently limited evidence for this as it is dependent on projects being completed. However, it is anticipated that as plans are implemented and projects delivered, these wider benefits will be realised in a way that is cost effective and will give confidence to local communities that they are aligned to their needs and being delivered as part of a wider strategy based on outcomes they want.

How the Peterborough LAEP has supported investment strategy

[The Plan] will act as a blueprint for positive change in our city that directly benefits existing residents and businesses as well as future generations and will direct the strategy to secure the volume of inward investment we will need.

Adrian Chapman, Executive Director: Place and Economy, Peterborough City Council

How Local Area Energy Planning can unlock value for key stakeholders

Local Area Energy Planning can be used to promote engagement and collaboration across organisations and departments, providing the framework to develop a united plan for an area, giving certainty to investors and project developers of the commitment, drive, and political buy in for an area to deliver.

Input from a range of bodies and organisations is crucial to ensure a LAEP reflects the genuine local context, and that buy-in to the plan and pathway to Net Zero is cemented, creating the conditions for its delivery.

A LAEP not only supports the practical implementation of Net Zero projects, but also significant strategic benefits to a wide range of stakeholders.

Local authorities are best positioned to lead and own Local Area Energy Planning as they are motivated to drive Net Zero at local scale and are trusted, impartial organisations. They have the influence to promote the plan outputs, realising investment from a wide range of developers and ensure there is alignment with the needs of the local area[19].

The powers and responsibility to influence different sectors, such as housing and transport, fall under the remit of different local government structures. This creates opportunity for Local Area Energy Planning to;

- act as a convener, to bring together the key actors that will be involved in supporting local areas transition to Net Zero,
- to coordinate decision making,
- to coordinate different priorities and delivery strategies across unitary, county and district councils and organisation departments.

As a local borough councillor...

I want to identify how we best decarbonise our area while ensuring the community can benefit. Its important I have evidence to develop business cases for further investment and projects.

Regional models of local government, such as combined authorities can act as a critical enabler for LAEP. While a LAEP can be delivered by a single authority, a combined authority allows multiple individual local authorities to collaborate and implement collective decision making across a shared geography. It enables shared ambition, amplification of political voice, and to varying degrees leverage of devolved powers and resources from UK government.

The opportunity for Combined Authorities to exert influence in policy areas such as skills, infrastructure, housing and Net Zero, can also create opportunities to boost subsequent implementation of plans. This can also help address capacity and capability gaps present within individual constituent authorities.

Combined authorities can utilise their regional and strategic mandate to play a coordinating role with local stakeholders, to co-develop a shared vision and utilise regional governance structures to arrive at consensus and political support for LAEP.

If LAEPs are carried out in a consistent way, neighbouring plans across a region can be aggregated at a regional level and therefore be more closely aligned to other planning activities such as infrastructure upgrades, housing development targets, and development plans.

As a combined authority leader...

I want to attract investment to the region by demonstrating our commitment and providing certainty to net zero opportunities across housing, buildings, renewable generation, and transport.

Devolved governments can use Local Area Energy Planning to improve the link between spatial and energy planning, and energy, climate and Net Zero policy making. It offers a methodology to apply a consistent approach to make place-based whole energy system decisions, and align investment, across the whole energy system.

Welsh Government has made a major commitment to rolling out Local Area Energy Planning across the entire country, to help identify the low-regret actions to decarbonise local energy systems. Policy 20 of Net Zero Wales outlines Welsh Government's commitment to energy planning through establishing the Welsh Government LAEP[20] Programme. Energy Systems Catapult is acting as technical advisor across Wales, ensuring that LAEPs delivered by third parties are developed to a defined set of requirements, promoting consistency, quality, and the ability to compare and aggregate plans across a wider area. The Catapult will work with Welsh Government to aggregate all 22 LAEPs to support the creation of a National Energy Plan based on 'bottom-up' balanced with 'top down' evidence in 2024.

UK government departments and HM Treasury – specifically Department for Energy Security and Net Zero (DESNZ), Department for Transport (DfT), and Department for Levelling Up, Housing and Communities (DLUHC). Local Area Energy Planning provides a bottom up, whole energy system evidence base to inform decision making, coordinating policy design and funding programmes. This evidence can be used to identify the investment needs, opportunities and supply chain requirements for regions and local areas, and if done consistently, can be aggregated to provide insight at national scale.

Local Area Energy Planning establishes what local areas want and will support (rather than a top-down sectoral approach), to achieve Net Zero and helps to drive local ambition and innovation. It also ensures that national public funding is spent efficiently and with maximum and optimised impact towards achieving Net Zero.

Energy network operators are key primary stakeholders and play an essential role in the creation of a LAEP. They can use outputs from Local Area Energy Planning to help inform network investment activities and opportunities, such as flexibility, by considering a coherent plan of local interventions and local characteristics and needs. If a consistent approach was used across a region, the operator would ultimately be well informed to deliver better value to their customers and enable local Net Zero project delivery at the pace required.

Aligning network investment to local needs is critical to deliver Net Zero. Network connections are currently a risk and barrier to project delivery.

LAEPs can make it possible to identify projects which could enable greater flexibility on the electricity grid, therefore potentially preventing the need for some grid infrastructure reinforcement. This could enable network operators to plan investment priorities more confidently, resolve connection issues in some areas, and ultimately lead to lower costs for the customers.

The LAEP could enable more transparent decision making for stakeholders, as well as increase the number of Net Zero related projects.

Many network organisations are already creating dedicated resource to support Local Area Energy Planning activity.

As a energy network operator...

I want to be able to make the case to invest in upgrading the network and identify potential flexibility to ensure local area can develop and decarbonise in the most effective way.

UK Power Networks through their Collaborative Local Energy Optimisation (CLEO) project are "developing a self-service digital tool that enables local authorities to make the best choices for their communities in developing the LAEP". UK Power Networks are also building a team that will assist its LAs on their climate plans each year of RIIO-ED2, offering a three-tiered support service utilising a framework to assess, develop action plans and deliver investments where a prescribed level of certainty is achieved.[21]

Ofgem have highlighted how Local Area Energy Planning can support 'taking a whole energy system, planned view of the future and enabling other stakeholders, particularly the local authorities and community groups that are progressing Net Zero in their areas, to plan and operate accordingly'[22]. Ofgem have also issued guidance setting out criteria for Local Area Energy Planning being 'done well'[23] and in their recent proposals have set out taking a more localised whole energy system energy planning approach[24]. The Local Area Energy Planning guidance offers a robust and stakeholder informed methodology to underpin aspects of the future institutional governance arrangements around the network, shaped by Ofgem.

As a manager at Ofgem...

I want to ensure changes to our energy infrastructure offer the best value to customers, while supporting the transition to net zero.

Social housing providers can benefit from having a plan and evidence base to inform future investment decisions on the housing stock that they manage. A LAEP will identify opportunities applicable to specific properties in an area for energy efficiency, renewable generation and low-carbon heating upgrades, based on the characteristics of those properties, as well as developments in the area likely to affect homes (particularly heat networks). LAEPs can focus project activity and interventions on social housing stock given a local area's ability to influence activity on this tenure type. Depending on the scale of homes managed by the provider, organisations are usually a primary or secondary stakeholder when supporting the creation of a LAEP.

Project developers can use the outputs from a LAEP to identify lower risk potential project locations, and the level of investment needed. As LAEPs are whole energy system, they can also help identify potential wider project risks, timelines, and costs, such as likely grid connection costs. This is invaluable in helping harness the private sector to accelerate delivery of Net Zero, creating confidence and a 'jumping off point' for places to commence market engagement.

For developers interested in single-asset classes, such as solar PV or heat networks, this ability to quickly tap into an understanding of scaled project development opportunities with lower risk is invaluable. In addition, particularly where LAEPs are created at a regional level (as per the 10 LAEPs produced as part of the Greater Manchester Local Energy Market project[25]), mixed-asset class development opportunities can be quickly understood as a regional portfolio. This can offer huge investment opportunity across a longer time frame, as well as huge impact towards Net Zero.

As a project developer...

I want to identify commercially viable project opportunities to deliver while ensuring they are suitable for the area and will meet the needs of the community.

Investors, including public and private organisations can use LAEPs to identify opportunities (and at scale), providing increased certainty that investments are part of a coordinated plan and removing the risk of stranded assets, hence helping to lower the risk and facilitate the level of investment required to transition to Net Zero, utilising the LAEP and its outputs in support of developing business cases.

Due to the scale of investment needed to realise Net Zero, it is vital for strategic plans to be created in a trusted, consistent manner to reduce these risks as quickly as possible. The coordination offered by a LAEP, also enables alignment of multiple sources of investment from various stakeholders, increasing value for money, and ensuring effective blending and timing of different sources of finance.

Communities can benefit from supporting the creation of LAEPs by engaging with the process through local groups and organisations; helping to ensure that local priorities are captured in the process. Community engagement and support is vital to the implementation and LAEPs can help identify potential near-term projects that community energy models can deliver, returning value to communities.

The goal of a LAEP is to define the pathway for an area to meet Net Zero in a cost-effective way, and therefore, ultimately should result in the energy system leading to cheaper bills, and improved services. The outputs of a LAEP could also be used by local stakeholders to engage local citizens in the Net Zero energy transition, helping bring them on the journey as projects are taken to the next stage of implementation.

A report produced by Regen on behalf of Energy Systems Catapult; 'Exploring community benefits for and from Local Area Energy Planning' (2019) identified that "interviewees believed LAEP would help community energy groups find their place in the new, low carbon energy system, and help them decide which are the best projects for them to focus on".[26]

As a government policy lead...

I want to understand the costs associated with achieving net zero across the UK. From this we can deliver impactful programmes, based on robust evidence that align with local needs and priorities, ensuring government funding is well spent leading to economic growth, and skills, as well as net zero.

How Local Area Energy Planning is building momentum

The momentum and progress that has been made around Local Area Energy Planning is clear, with growing involvement from cross sector stakeholders. Here are some key activities.

The initial concept of LAEP was developed and piloted in 3 areas between 2015 - 2018 – Bridgend, Newcastle, and Bury in Greater Manchester to primarily focus on residential heat decarbonisation. Over the 8 years since 2015, significant innovations and developments have been made including data availability, expanding the scope, visualisation and style of information displayed in LAEPs (to guide where to target activity) and research activities. This recently culminated in the 'Guidance on Creating a Local Area Energy Plan' published in 2022 by Energy Systems Catapult and funded by Innovate UK[27].

The guidance is helping create consistency in delivery and has enabled multiple market actors to deliver a LAEP, and supported places to procure more consistently.

Supported by the guidance, developmental progress since the initial pilots is continuing to respond to new market demands, for example developing ways to reduce cost in delivery, and to provide dynamic and digitally enabled outputs for plans.

This activity represents Local Area Energy Planning moving through a journey from initial innovation, through validation, and towards standardisation and commercialisation. This move through the innovation cycle could accelerate with a clearer UK position on the role of Local Area Energy Planning. This would give confidence to providers to invest in iterative innovations to reduce cost, increase speed and enhance functionality in response to evolving market needs like digitisation.

In a national context, Welsh Government have committed to each area developing a LAEP to aggregate and create a National Energy Plan by 2024. The outputs will be used to evidence future energy demand and supply to identify gaps to enable a system plan that is flexible and smart.

A growing place-based approach

2017

LAEP concept developed and tool created piloted in 3 areas: Bury, Bridgend, and Newcastle

2018

Published:
- 'Local Area Energy Planning: Supporting clean growth and low carbon transition',
- 'Insights from the 3 pilot local areas'
- 'Guidance for local authorities and energy providers'

2019

Rapid increase in local authorities declaring climate emergencies and developing climate action plans

2020

Ofgem published 'Local Area Energy Planning: The Method' – co-authored by ESC and Centre for Sustainable Energy

2021

Published: 'The future of local area energy planning in the UK'

Welsh Government publish Net Zero Wales plan with commitment to LAEP

UKPN launch the Enabling Open Energy Data programme

Royal Town Planning Institute publish 'Place-based approaches to climate change' - advocates for a place-based and holistic approach in LAs

UK100 published 'Power Shift' Report calls for a national framework for local area energy planning (LAEP)

2022

Published: guidance documents for creating LAEPs

UKRI announce funding for LAs for pioneering places and fast followers for net zero planning

DNOs published business plans with greater emphasis on LA engagement (RIIO-ED2)

UKPN start Collaborative Local Energy Optimisation (CLEO) project

SSEN partner with **Dundee City, Oxford City** and **Oxfordshire County Council** on energy planning

Mission Zero Review –Recommends a statutory duty for local authorities to take account of net zero targets

CCC published '2022 Progress Report to Parliament'. Recommendation to government in support of Local Area Energy Planning

2023

Published: Building a governance framework for Local Area Energy Planning

Increase in LAs procuring LAEP

Ofgem published consultation 'Future of local energy institutions and governance' - references LAEP as a key policy interaction

RIIO-ED2 begins and business plans take affect

'Green Day' policy documents published - Key theme included speeding up the planning process to attract investment

Key

- ESC
- Local gov
- UKRI/Ofgem
- DNOs
- Other supporters

DNO RIIO-ED2 commitments – 2023 - 2028

Electricity North West: Recruit 3 new energy planning engineers to ensure whole system approach and support LAEPs

Northern Power Grid: Recruit 6 local area energy plan advisors to work with local authorities and sector. Creation of 'Open Insights' a toolkit to enable access to data. Hosting 4 local energy planning forums per year

SSEN: Creation of open data portal with advisory support. Provision of dedicated support to develop LAEPs

SPEN: Propose creating a £30 million Distribution Net Zero Fund to support low-carbon projects, aligned to national, regional and local ambitions. Have committed to creating 'Strategic Advisors' to partner with Local Authorities and regional governments.

UKPN: Establish a £9.3m dedicated local area planning team, 20 full-time employees, that will work with all regional planning authorities, and other local stakeholders, to assess their energy plans and develop actionable decarbonisation plans.

NG (Was WPD): 130 local authorities actively partnered to deliver ambitious Local Area Energy Plans. States 'we will therefore work closely with local authorities to help them establish comprehensive LAEPs and then use these plans to inform our future energy scenarios and network investment plans'.

Current support for local authorities and Net Zero delivery

Support has been growing for local authorities to take a lead in managing the delivering of Net Zero in their area, and the role of Local Area Energy Planning. Here are some examples (this list is not exhaustive).

Net Zero Living Programme[28]

Innovate UK's (IUK) £60 million, three-year Net Zero Living Programme which launched in 2022 aims to help places and businesses across the UK to accelerate the transition to Net Zero.

The Pathfinder programme aims to support up to 30 places to develop a plan which addresses non-technical barriers, with local authorities, to accelerate their transition to Net Zero. Some projects are focussed specifically on exploring development and implementation of Local Area Energy Planning.

The Fast Followers programme aims to support local authorities in 21 places[29] and fund a dedicated Net Zero Innovation and Delivery officer role. The funding will help to further develop the local authorities Net Zero delivery plans, some of which include a LAEP, improve delivery pathways, and enable adoption at scale of innovative products and services.

Net Zero Go[30]

Net Zero Go is developed by Energy Systems Catapult with support from IUK and the Department for Energy Security and Net Zero (DESNZ) and 'is a unique, powerful, easy-to-use platform bringing together all the tools and support that local authorities need to develop successful, locally focused zero carbon projects, taking initiatives from a standing start to operational and beyond.' These can help to implement the LAEP, 'tackling many of the common barriers to action, such as time and resource, financing and procurement, and local energy knowhow.'

Cities Commission for Climate Investment (3Ci)[31]

3Ci, supported by IUK and DESNZ, is working to create a wider partnership including UK government, Innovate UK, Metro Mayors, Combined Authorities, Scottish and Key Cities, Counties and Districts and a growing league of private investors, financiers, advisors, developers and built environment technology professionals. The aim is to accelerate common, investible solutions to the climate crisis.

UK Infrastructure Bank (UKIB)[32]

UKIB is the government-owned policy bank which launched in June 2021, providing £22bn of infrastructure finance and partnering with the private sector and local government to finance a green industrial revolution and drive growth across the country. UKIB is also building a local authority advisory service, currently being piloted, to support and develop project finance.

Energy Network Operator commitments – 2023 - 2028

All network operators have increased, or plan to increase, the provision of dedicated resource to engage with local authorities and support the production of LAEPs as part of their latest business plans. This is an important factor in facilitating the delivery and development of Local Area Energy Planning; as aligning network planning and investment to other sources of investment, and local Net Zero ambitions are a critical enabler of action.

Key activities within electricity network operator business plans include:

- **Electricity North West:**
  Recruiting 3 new energy planning engineers to ensure whole energy system approach and support LAEPs

- **Northern Power Grid:**
  Recruiting 6 Local Area Energy Plan advisors to work with local authorities and sector. Creation of 'Open Insights' a toolkit to enable access to data. Hosting 4 local energy planning forums per year

- **Scottish and Southern Electricity Networks:**
  Creating a open data portal with advisory support. Provision of dedicated support to develop LAEPs

- **Scottish Power Energy Networks:**
  Proposing to create a £30 million Distribution Net Zero Fund to support low-carbon projects, aligned to national, regional and local ambitions. Have committed to creating 'Strategic Advisors' to partner with local authorities and regional governments.

- **UK Power Networks:**
  Establishing a £9.3m dedicated Local Area Energy Planning team, 20 full-time employees, that will work with all regional planning authorities, and other local stakeholders, to assess their energy plans and develop actionable decarbonisation plans. They are also "developing a self-service digital tool that enables local authorities to make the best choices for their communities in developing the LAEP" called Collaborative Local Energy Optimisation (CLEO).

- **National Grid (was Western Power Distribution):**
  130 Local Authorities actively partnered to deliver ambitious Local Area Energy Plans. States 'we will therefore work closely with local authorities to help them establish comprehensive LAEPs and then use these plans to inform our future energy scenarios and network investment plans'.

Coverage of LAEPs across the UK is growing

Places that have completed or are currently progressing a LAEP, regardless of the practitioner delivering the plan, are shown on the map in pink, and areas with a Local Energy Area Representation (LEAR) delivered by Energy Systems Catapult are shown in blue. A continually updated version can be found here.

The Local Energy Area Representation (LEAR) can be considered as the foundational stage of a LAEP and provides an area with data and insight into the current energy system with visualisations. This baseline of the current system is part of the LAEP process when supported by stakeholder engagement (Stage 3) and therefore, can ensure a local authority is well prepared, with a consistent understanding of the baseline across stakeholders, and could progress towards developing a full LAEP.

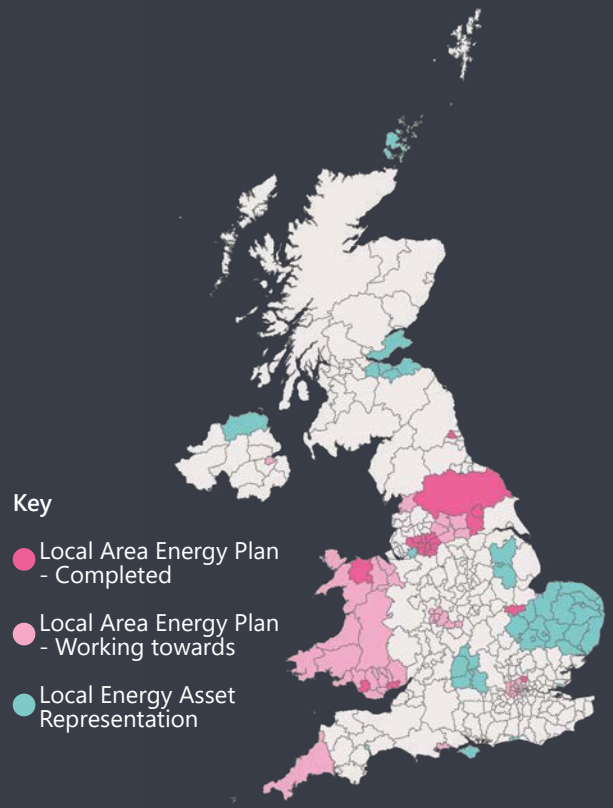
Other areas may have undertaken similar baselining activities, though the ones captured on the map are those which have been directly delivered by Energy Systems Catapult.

With the increase in Local Area Energy Planning activity, some of the areas that have or are in the process of creating a LAEP are now moving their focus to the delivery of the activity and projects specified in LAEPs.

Stakeholders recognise that having a detailed breakdown of activity and investment need outlined at a spatial and granular level, particularly where 'low regret' activity and investments are identified, can provide significant opportunity to increase interest and accelerate progress.

This is a key differentiation between completing a full LAEP exercise, rather than progressing just a baselining of the current system. With a full LAEP the optimum range of interventions, and the total quantum of investment or 'size of the prize', is presented across a timeline conversant with the Net Zero ambition and in-line with stakeholder views. From baselining only, project opportunities can be identified on the current system, but without the confidence that they are coherent from a whole-systems perspective, in-line with the Net Zero ambition, and de-risked for the long tem from an investment perspective.

At national level, this is evidenced by Greater Manchester Combined Authority's "trailblazer" devolution deal, where Local Area Energy Planning was commended as pioneering, and government recognised its role in understanding local opportunities for action and investment[33].



82% of local authorities in England & Wales have declared a climate emergency.

Over 16 % of local authorities in the UK have, or are developing, a Local Area Energy Plan*.

We're at a tipping point but a lack of clarity, consistency and coordination remains. This risks duplication, and inefficiency of investment.

*as of September 2023

Progress has been made on previous sector-generated recommendations but more needs to be done now

Consistency and standard approaches are improving however more is needed if the full potential value of Local Area Energy Planning is to be realised.

Various sources have proposed recommendations for what is needed to ensure local authorities are able to deliver their ambitions for Net Zero. These include:

- Future of LAEP, 2021[34]
- Mission Zero Net Zero Review, 2023[35]
- Building a governance framework, 2022[36]
- Project LEO Final Report: a digest of key learnings, 2023[37]
- UK100 - Energy networks: insight briefing, 2022[38]

We have categorised the recommendations into the key outcomes they are trying to achieve and assessed relative progress against them based on publicly available information.

The main themes are:

- Catalysing delivery at scale
- Devolving accountability for LAEP to accelerate local action
- Ensuring local energy and climate action plans don't become disconnected from energy infrastructure planning
- Driving consistency and high standards for Local Area Energy Planning

Driving consistency and standards for delivering Local Area Energy Planning has seen the most development as new tools are available to support the process, and more organisations are investing in capabilities and resources to support delivery.

However, to unlock the full potential value of Local Area Energy Planning, work is stillneeded to demonstrate a national commitment across the UK by incorporating the process in regulation and policy.

An update on the progress made against individual recommendations is provided here:

Catalysing delivery at scale

Recommendation	Progress	Description
Establish a governance arrangement with key national stakeholders to oversee the rollout of consistent LAEPs.		While not explicitly focused on LAEP delivery, Ofgem's proposals for a new 'Regional System Planner' (RSP) function within the Future System Operator (FSO) could help to ensure technical consistency in subnational planning. The RSP function could be developed to include convening stakeholders and aligning spatial planning and energy network planning. Local Area Energy Planning could play a key role in supporting this engagement and regional planning process.
Prioritise resource to produce LAEPs and develop a Net Zero Delivery Framework to enable local energy transition activity		UKRI are supporting local authorities in resourcing decarbonisation planning activities. However, this is competitive funding and not available long term and although related, is not directly aligned to LAEP. The Welsh Govt is resourcing LAEPs as part of its commitment to create a National Energy Plan by 2024, and the Scottish Govt has made Local heat and energy efficiency strategies (LHEES) a statutory requirement. Long term resourcing for LAEPs in England remains unclear.
UK government should reform the local planning system and the National Planning Policy Framework now. Including a clearer vision on Net Zero with the intention to introduce a Net Zero test, give clarity on when local areas can exceed national standards, give guidance on LAEP, encourage greater use of spatial planning and the creation of Net Zero Neighbourhood plans, and set out a framework for community benefits.		The National Planning Policy Framework is currently under review in England, and a revised policy has been tabled in the Scottish Parliament. While there is a clear intention to strengthen Net Zero as a planning priority, the role of Local Area Energy Planning remains unclear. The CCC is currently studying the role of local planning in Net Zero and its forthcoming report is likely to offer constructive recommendations for strengthening the role of local planning.

Recommendation	Progress	Description
Independent coordination at the regional level is required to ensure lowest cost of Net Zero delivered.		Greater independent coordination of LAEPs is being seen across the UK including the Welsh Government, GMCA, and GLA examples which are underway, as well as Scotland considering how its LHEES framework can inform network investment planning (e.g. through its Heat Electrification Strategic Partnership). Ofgem proposals for a RSP role could also support this. If the role of LAEP were formalised then the requirement to coordinate at regional level would need to be addressed.
Expand the role of Net Zero hubs to support with LAEP project development and investment.		The Net Zero Hubs are receiving more enquiries from their areas about progressing LAEPs. However, additional resources would be needed to provide more proactive and detailed support for interested local authorities. The Energy Systems Catapult's Net Zero Go platform provides resources and LAEP guidance and enables knowledge sharing among local authorities.
Local Energy Oxfordshire recommend the development of a body that can enable the development of a flexible and scalable LAEP and associated toolkit in regional geographies.		Some progress has been made in this area through LAEP guidance, Net Zero Go, and the development of expertise in the supply chain. The regional dimension of this recommendation could also be progressed through the development of the RSP function envisaged in Ofgem's recent consultation.
Ofgem to commission further evaluation of statutory enhanced partnerships for delivering coordination.		We are not aware of any further explicit analysis of the potential role of statutory enhanced partnerships. However, the proposed role of RSPs in Ofgem's future governance consultation appears to support the need for a convener in the coordination of energy and spatial planning.

Devolving accountability for LAEP to accelerate local action

Recommendation	Progress	Description
Endorse LAEP activity being led by local government		Ofgem consultation suggests that local authorities should retain the responsibility of delivering LAEPs. UKRI has launched several funding programmes available to local authorities related to Local Area Energy Planning including – Net Zero living programme. The role of local government in facilitating the energy transition appears to have clearer government backing through policy in Wales and Scotland.
Provide multidisciplinary resources into LAs to support with LAEP.		The Net Zero Living: Fast Followers fund is designed to be used by local authorities to build skills and capabilities to progress Net Zero. The Net Zero Go platform mentioned in previous table also provides resources and knowledge sharing to support LAEPs, particularly in delivering LAEPs and developing implementable projects and gaining investments.
Appoint a technical assistance facility to oversee the rollout of consistent LAEPs that supports Net Zero and the levelling up agenda		No national technical assistance facility has been designated. However, Energy Systems Catapult has played the role of technical advisor in the delivery of the Welsh Government LAEPs, in addition to the development and revision of LAEP methodology guidance. There is also increased technical capacity to support LA's in the supply chain as more practitioners are offering Local Area Energy Planning services.

Ensuring local energy and climate action plans don't become disconnected from energy infrastructure planning

Recommendation	Progress		Description
LAEPs should be an essential piece of evidence in Ofgem's regulation of investment in energy networks.			All energy networks have increased engagement activities and data sharing developments as part of the ED2 cycle that began April 2023. Although LAEPs are not considered essential at present, incorporating the needs of local authorities has become higher priority and LAEPs can provide a method to achieve this consistently.
Need to build DNO and local authority relationships, potentially through business planning process overseen by Ofgem.			Ofgem has launched a consultation around future network regulation and there is a clear opportunity to build a clearer and more comprehensive join between network company investment planning processes and LAEP-style local authority led analysis and stakeholder engagement.

Driving consistency and high standards for Local Area Energy Planning

Recommendation	Progress	Description
Endorse the definition of LAEP		Guidance has been published by the Catapult, Ofgem, and IUK and has been referenced by local authorities procuring a LAEP, and in sector reports. However, there is no national adoption of this and there are still a range of interpretations of what a LAEP involves and delivers. Questions about the scope, role, and implementation of a LAEP remain, especially in England. There is potential to learn lessons from the Scottish and Welsh experiences with LHEES and LAEP rollout respectively. There is also potential to clarify the operational interfaces between LAEP, distributed future energy scenarios (DFES), local spatial and transport plans, heat network zoning, local EV charging plans and the investment planning approaches required of energy distribution network companies.
Develop a method, guidelines and templates to assist in the coherent production of plans and establish roles and responsibilities.		There is potential to build on and clarify existing guidance to standardise definitions and specify the interfaces between LAEP and other relevant plans (including LA spatial and transport plans, heat network zoning) and network company investment planning methods.
Provide innovation funding to drive LAEP tool development.		Network operators are investing in tools to support local authority engagement and facilitate data sharing needed as part of the LAEP process. DESNZ are supporting the development of Net Zero Go – a platform for local authorities to access useful resources to implement Net Zero projects. IUK have recently started the Net Zero Living programme supporting local authorities to develop Net Zero solutions. Consultants are also investing in developing tools which is evident from the range of suppliers offering Local Area Energy Planning to the market.

Actions needed now to accelerate delivery of Local Area Energy Planning across the UK, ensuring all areas benefit

After a combition of stakeholder interviews, assessing progress on current recommendations and analysis of general sector activities, the following is proposed to overcome the barriers preventing Local Area Energy Planning realising its full potential in supporting the UK's transition to Net Zero.

Developed, with innovation funding, as a new approach to the challenge of organising effective local energy system action and investment towards Net Zero, Local Area Energy Planning has been progressing through an innovation cycle:

1. Developing an impactful method of delivering the required outputs which can be replicated across areas;
2. Providers consolidating around this consistent approach;
3. Stakeholders and users recognising the value, bringing certainty to the market;
4. Providers confidently investing in iterative innovations to reduce costs, increase speed, and enhance functionality in response to evolving market needs such as digitisation

The sector is now at the boundary between Stages 3-4. Stakeholders are consolidating around the LAEP guidance, recognising the value that integrated whole energy system spatial planning can bring. With more and more local authorities commissioning LAEPs, there is greater confidence given to the increasing number of providers in the sector to invest in innovations. This will drive down costs and increase functionality, however continuing national uncertainty and inconsistency risks this.

We have been working to understand in detail the delivered cost of a LAEP, and to develop approaches to bring down this cost and support continued growth of the market. Based on this, we believe providing all areas in the UK with a LAEP, and supporting a central technical advisory function, would likely cost in the region of £40million dependant on scope. Funding only baselining activity, (Stages 1-3 of the LAEP guidance[39]) would reduce this cost.

Further work would be needed to fully cost this, and to determine the best programmatic approach to a roll-out as a one-off funded exercise. Key considerations would include sequencing over time to build sustainable capacity within a supply chain of LAEP practitioners, and ensuring plans are suitable for efficient and effective onward use. Significant learning can be taken from the approach to the roll-out of Local Area Energy Planning in Wales, and work on delivery of other planning exercises to date, particularly in regional programmes.

We still believe endorsing the full LAEP approach (and supporting all places to deliver it) would be most effective, though a national decision has not been made, and this takes time. The following are the immediate actions we think are needed to maintain momentum, prevent inconsistency and inefficiency, and deliver value. These actions would also help create a sustainable supply chain capacity for LAEP delivery, ensure they drive impact, and are as suitable for ease of continuous use and update as possible, following a funded initial roll-out.

Adopt

Recommendation 1:
UK government, including the Department for Energy Security and Net Zero (DESNZ), and Department for Levelling Up, Housing and Communities (DLUHC), should adopt the LAEP guidance as the nationally endorsed model for place-based whole energy system decarbonisation planning. Aligning it with other Net Zero funding initiatives across departments, to direct place-based support.

Why?
No statutory responsibility exists across the UK for local government to deliver on Net Zero or to undertake detailed whole energy systems integrated planning. This has led to a wide variation in approaches, capability, capacity, and resources designated to support this approach. This risks inconsistent delivery which could result in inaction, opportunity cost, and duplicative cost.

Fund

Recommendation 2:
There should be funding for all places in England, Scotland and Northern Ireland to deliver a full LAEP, or as a minimum whole energy system baselining following Stages 1-3 of the LAEP guidance (if government considers it too early to mandate full LAEP delivery). This should be undertaken in reasonable time and by providing places with the support needed to deliver.

DESNZ, HM Treasury, and DLUHC should be involved in this activity due to the cross over of responsibilities and priorities in local government led decarbonisation. Supporting even consistent baselining will allow places to realise some immediate benefit, and progress more efficiently towards a full Local Area Energy Plan.

Why?
There are no dedicated funding routes for the entirety of the UK for LAEP or similar whole energy systems integrated planning exercises. There is inconsistency in delivery and some places are unable to progress.

Join up

Recommendation 3:
The Local Area Energy Planning process should be explicitly recognised as a mechanism to align spatial and energy systems planning and funding arrangements, at regional and national levels. This should be achieved by referencing the LAEP approach – and potentially the role of Regional System Planners proposed by Ofgem - within the revised National Planning Policy Framework and future network institutional arrangements. This will require close coordination of policy making between DLUHC, Ofgem and DESNZ.

Why?
Local authorities do not have direct decision-making influence over the energy infrastructure in their areas, and there is no consistent approach to coordination. This can lead to missed opportunities to align investment, projects being delayed, and uneconomical caused by a disconnection between spatial planning and energy planning.

Data

Recommendation 4:
DESNZ should facilitate a sector taskforce to agree the scope of data inputs and formats for Local Area Energy Planning exercises. This will help ensure consistency and quality. Use cases for output data should also be defined for key user groups, to ensure LAEPs are interoperable and affect change.

Involvement from key stakeholders including local government, energy network operators, LAEP practitioners, Ofgem, Net Zero Hubs, and DLUHC would be vital. Current centres of excellence and independent work on data collation, use, standards and quality should be central to this.

Why?
Data consistency, comparability and interoperability can be a barrier particularly across regions, and its materiality to plan outputs is not widely understood. Data outputs do not always meet the needs of all potential end-users of the plans and more understanding of this is required. For example making plan outputs as useful as possible to support implementation planning, project mobilisation, and refreshes or updates.

Build Capacity

Recommendation 5:
DESNZ should build-out from existing centres of excellence, capacity and capability support, to establish an advisory facility to support local authorities with whole energy systems Net Zero planning.

Why?
Some local authorities lack the capacity and capability to undertake and realise the benefits of a LAEP. This includes in understanding how to support, specifiy, deliver or make use of a LAEP.

Opportunity cost, duplication, and inefficiency in delivery of planning exercises can arise, due to a lack of a resourced expert advisory capacity to coordinate across wider geographical areas.

Why do we think these are the right recommendations?

Adopt

Recommendation 1:
UK government, including the Department for Energy Security and Net Zero (DESNZ), and Department for Levelling Up, Housing and Communities (DLUHC), should adopt the LAEP guidance as the nationally endorsed model for place-based whole energy system decarbonisation planning. Aligning it with other Net Zero funding initiatives across departments, to direct place-based support.

Why?
There is currently a lack of statutory duties and standard guidance for local authorities to deliver Net Zero in their local areas and therefore a range of approaches have been used, often depending on funding available, in-house capability and skills, and priorities.

We have observed the LAEP guidance being referenced in tender exercises for Local Area Energy Planning by local authorities, however there are a range of interpretations and approaches being applied.

Even if national funding to deliver full LAEP exercises consistently is not in place, by ensuring consistent use of the process for exercises of any depth, local authorities would have greater certainty on how to specify any planning exercise, and stakeholders and delivery partners would have greater trust in the process and its outputs.

What are our desired outcomes?

Decarbonisation planning exercises carried out across the country are done so in line with consistent principles and stages, by informed clients, regardless of their depth.

Consistency, replicability, clarity of expectations and standards are understood across the sector, and are predictable, allowing growth in the market of capable and high-quality practitioners, who can deliver at the most competitive cost possible.

Publicly funded planning exercises are undertaken in-line with robust guidance for best value. Confidence is created for investment and delivery as a result, and stakeholder engagement is central to the approach.

Proposed approach

Endorse the guidance and adopt it for publicly funded exercises

The LAEP guidance should be adopted and visibly endorsed by DESNZ as the UK's recognised model for whole energy systems decarbonisation planning. This would give certainty, enabling local authorities to prioritise, specify work clearly, and gain senior leadership commitment.

Other market participants could establish clear expectations and standards for delivery, helping further develop and mature what is becoming an established market for delivery of LAEP services, and drive down costs. These services could stretch across the LAEP stages set out in the guidance, e.g. some providing baselining activity, or innovation in digitisation of outputs or consumer engagement.

Align with national Net Zero planning funding opportunities

Supporting LAEP creation and aligning the presence of a LAEP with funding initiatives for implementing projects, such as major energy efficiency and heat decarbonisation schemes, would help to further enhance the value of a LAEP, ensuring it can be used to leverage further and efficiently deployed investment.

The LAEP would provide evidence that projects are part of a wider strategic plan that takes the whole energy system into account. Through the process, the local authority would have relationships, and buy in, with the key stakeholders needed to deliver, helping to reduce risk and uncertainty of the next project phase.

By shortening the gap between project identification and delivery, and to maximise the opportunity of scale it provides, government could use LAEP outputs to inform design of locationally based grant funding priorities, rather than use competitive ad hoc bidding into national funds. This could be considerably more efficient and allow more tactical use of grant funding to attract private finance on a place-basis, and to signal to project developers which opportunities exist locally.

Fund

Recommendation 2:
There should be funding for all places in England, Scotland and Northern Ireland to deliver a full LAEP, or as a minimum whole energy system baselining following Stages 1-3 of the LAEP guidance (if government considers it too early to mandate full LAEP delivery). This should be undertaken in reasonable time and by providing places with the support needed to deliver.

DESNZ, HM Treasury, and DLUHC should be involved in this activity due to the cross over of responsibilities and priorities in local government led decarbonisation. Supporting even consistent baselining will allow places to realise some immediate benefit, and progress more efficiently towards a full Local Area Energy Plan.

Why?
As a national programme and funding of full LAEP delivery has not been put in place, resource and capacity in local authorities remains a key barrier.

While Local Area Energy Planning continues to gain traction and the case for funding to deliver fully against the guidance becomes clearer, initial and immediate planning action cannot be delayed. It is essential that this at least includes baselining, and takes place in a coordinated way which enables ease of development into a full integrated plan.

Funding full LAEP roll-out is the recommended approach to deliver maximum value, scale of investment and coordination. This will avoid inequity where places with a LAEP are more able to present a coherent Net Zero energy system investment portfolio. If this is not possible, funding baselining only will ensure stakeholders are engaged in a shared understanding of the current system, project identification, and ease of progression into a full LAEP.

What are our desired outcomes?

All places, as an ideal scenario, are covered by a LAEP. Ensuring stakeholders are bought into a coherent plan to deliver a Net Zero whole energy system by their chosen date. The projects are understood, in terms of what should happen where and when. The amount of total investment needed is understood, communicated effectively to the market with confidence, and public funds are directed efficiently.

All places, as a minimum, have a clear understanding of their current energy system through a consistent approach. This baseline is shared and co-owned by critical system stakeholders, creating a firm foundation for future planning and decision making, enabling short term opportunistic project development where desired. A full Local Area Energy Plan can then be developed more efficiently.

Proposed approach

Provide funding for all places to undertake a full LAEP

National funding should be provided by DESNZ, DLUHC or HM Treasury to support the roll-out of full LAEPs to cover England, Scotland and Northern Ireland. We estimate that with the inclusion of the advisory facility (recommendation 5) this would cost around £40m.

Funding should be distributed geographically for places to access without competition, ensuring all areas can develop a LAEP at the optimum geographical scale. Existing governance structures supported by UK or devolved government could be utilised to facilitate the distribution and draw down of funding, if supported to do so including by the advisory facility. For example the Net Zero Hubs in England.

Baseline current energy system and identify 'quick win projects'

By DESNZ, DLUHC, and HM Treasury funding places to undertake Local Area Energy Planning in a consistent way, it will ensure that all areas of the UK have at least a baseline understanding of the current energy system, with agreed priorities for intervention and immediate action.

Incorporating stakeholder engagement (in line with the LAEP guidance) will ensure that the integration of spatial and energy planning is commenced in all places with coordination of key actors, providing important groundwork for the continuing evolution of the delivery and institutional landscape, e.g. Ofgem's proposals of Regional Systems Planners.

When the capacity and support is in place to move to a full LAEP exercise, this could be seamlessly specified as additional scope. Cost-efficiencies may also be created by delivering against the LAEP guidance in this way, for example delivering Stages 1-3 on a 'one to many' basis, in preparation for the subsequent 'full LAEP' Stages 4-7 which could then be delivered at lower cost.

This would create some value in the immediate term, but in a way which can more easily and affordably lead into a full LAEP when needed as the early stages have already been delivered. This also staggers the national ask for funding of full LAEPs until measurable early impact has been realised, if required to demonstrate the value case.

It is important to note that a full LAEP approach is still strongly preferred, and this represents a low regret step, ensuring immediate action while allowing further work to take place to build towards national support for a full LAEP mandate.

Stakeholders should be aware of the different objectives and outcomes of the two aspects:

- The baselining applying Stages 1-3 (which can also be referred to as 'mapping') provide stakeholders with detailed data and visualisation of the area and its energy system; this can be used to help identify 'quick win' projects that would not be impacted by whole energy system factors.
- Completing the Stages 4-7 to create a full LAEP is necessary where places and investors want to make significant investments at scale, ensure Net Zero delivery at best cost and value, and whole energy system-based decisions e.g. identifying decarbonisation of heat, energy generation and storage options for an area, and energy network investment decisions

Ensuring baselining and plans are available across the UK would support project pipeline building at scale, creating benefit for investors and lending institutions like UK Infrastructure Bank. Opportunities for them to ensure their capital is deployed efficiently on route to Net Zero would become clearer.

Join up

Recommendation 3:
The Local Area Energy Planning process should be explicitly recognised as a mechanism to align spatial and energy systems planning and funding arrangements, at regional and national levels. This should be achieved by referencing the LAEP approach – and potentially the role of Regional System Planners proposed by Ofgem - within the revised National Planning Policy Framework and future network institutional arrangements. This will require close coordination of policy making between DLUHC, Ofgem and DESNZ.

Why?
There is currently no consistent approach embedded in policy, or national guidance, for local government to provide structured input and influence into energy network investment planning. This can lead to projects being delayed, uneconomical and overall inefficiencies in the development process caused by a disconnection between spatial planning (e.g. housing development) and energy planning (e.g. investment in the local electricity distribution network).

It is essential that the future institutional governance arrangements, associated with the energy system, facilitate the alignment of spatial and energy systems planning and investment.

Regional System Planners (RSPs) as set out in Ofgem's recent consultation on future energy system governance at the local level are a potential option. While Ofgem's proposals set out how the RSP model would carry weight in interacting with network planning decisions, the role and influence of local government and spatial planning decision making is currently less clear.

There is currently no policy defined to facilitate joining energy and spatial planning to complement Ofgem's RSP model.

What are our desired outcomes?

Network investment delivers an energy system for a Net Zero future that supports local areas to deliver their wider Net Zero priorities, including decarbonisation of housing stock and transport, at lowest cost.

The integration between planning frameworks at national scale unlocks aligned anticipatory network investment and provides a method to generate a long-term and scaled pipeline of aligned and de-risked energy projects.

The LAEP process helps identify how Local Authorities can deliver on other spatial policies and targets, for example identifying where land and network capacity is available or needed to bring forward new housing, or generation capacity.

Proposed approach

Define governance process for flow of information between local authorities and energy system institutions and Distributed Future Energy Scenarios (DFES)

Following national adoption of the LAEP guidance, and support to undertake baselining as a minimum, DESNZ should facilitate engagement between Ofgem, energy network operators and local and regional government stakeholders to specify clear information sharing processes and protocols. This should provide a coherent operational framework for data sharing and interfacing across local authority planning processes and functions. This should ensure LAEPs, and local authority led spatial and transport planning, heat network zoning, and regeneration programming inform each other and are mutually reinforcing and consistent. Similar data sharing should ensure consistency between LAEPs, and planning processes led by energy system institutions e.g. the network operators, or potential RSPs.

Currently the Distribution Future Energy Scenarios (DFES) are used to inform energy planning, which are a top-down approach providing a series of forecasts for EV deployment, heat pumps, district heating networks, solar PV, wind generation and battery storage.

LAEP is a bottom-up approach identifying the change that is needed to the local energy system and built environment.

Alignment between the two energy system planning techniques through improved flow of information could increase the confidence of the forecasts, providing greater evidence for energy investment. Enabling the influence of local government and spatial planning decision to be considered in energy systems planning and investment.

Incorporate LAEP in National Planning Policy Framework

Ensuring deliverability of LAEPs is critical for Net Zero. Spatially, Local Area Energy Planning should be established by DLUHC within the National Planning Policy Framework as a recognised evidence base, and material consideration in local planning policy. This was found within our Governance Framework for LAEP report[40], and would ensure interventions required for Net Zero are delivered by the planning system, and significantly increase confidence with respect to de-risking investment and deliverability of plans.

LAEP should inform spatial decision making across sectors such as housing, waste and transport, with planning authorities able to take a strategic approach to Net Zero.

With these interventions, LAEP outputs can provide a scaled, coordinated, and de-risked pipeline of investable projects. As with any integrated planning, some nearer term deliverable projects will inevitably be identified, as will some projects which require longer term development, therefore the pipeline will also be long-term.

Data

Recommendation 4:
The Department for Energy Security and Net Zero (DESNZ) should facilitate a sector taskforce to agree the scope of data inputs and formats for Local Area Energy Planning exercises. This will help ensure consistency and quality. Use cases for output data should also be defined for key user groups, to ensure LAEPs are interoperable and affect change.

Involvement from key stakeholders including local government, energy network operators, LAEP practitioners, Ofgem, Net Zero Hubs, and DLUHC would be vital. Current centres of excellence and independent work on data collation, use, standards, and quality should be central to this.

Why?
LAEP is an evidence-based approach and use of appropriate data is fundamental. Data inputs should ultimately enable the intended end use cases to be met, with accuracy, efficiency, and consistency across exercises. Data outputs should be interoperable and easy to utilise in digital platforms, e.g. for further mapping, refreshing plans, onward project implementation planning, or for aggregation.

Consistent understanding, availability, and ease of collation of data is a key challenge raised by stakeholders delivering LAEPs. Although progress has been made, evidenced by a range of programmes with Ofgem, DESNZ and UKRI funding, such as UKPN's project CLEO[41].

Confidence in planning outputs, within one place or across multiple related places, relies on a solid understanding of the underpinning data and where effort is best spent on its collation and cleansing. Without this, material impacts and sensitivities on planning outcomes may not be considered, genuine insights from plans may not be uncovered or trusted, and effort may be inefficiently spent on data gathering.

Stakeholders also raise the perceived risk that a planning exercise will be too static if its outputs are not easily refreshed or leveraged into onward detailed project planning, visualisation, or aggregation work. Understanding the different end-users of a LAEP and their data use cases is also essential in ensuring that planning can affect change, allowing stakeholders to lead into effective engagement, analysis, and implementation of projects and investment.

This understanding of data scope, both in terms of the materiality of inputs and the use cases of outputs, should be consistent across the sector to create trust, consistency of planning, and efficiency.

What are our desired outcomes?

There is a common understanding among LAEP practitioners, shared with other stakeholders e.g. local government and Ofgem, of the scope of input data required for a LAEP. This drives efficiency in effort spent on data collation and cleansing, and consistency of data used in exercises. LAEPs become cheaper, confidence and understanding of outputs is enhanced. Output data from LAEPs meets the needs of critical end users, including local government, electricity and gas network operators, and National and devolved governments. LAEPs are easier to scale and aggregate across larger geographical areas so their cumulative impacts are understood, and more easily influence investment and decision making. LAEPs are also easier to refresh and update consistently.

Proposed approach

Facilitate cross-sector task and finish exercise

DESNZ should facilitate a cross-sector task and finish exercise, between LAEP practitioners, local government, energy networks, and regulators, to agree the scope of data inputs for Local Area Energy Planning exercises, and a consistent understanding of sensitivity and materiality. A full range of output data use cases and their requirements should also be defined, with a view to maximising the opportunity for LAEPs to drive impact, project mobilisation, investment, and to enable LAEP updates and refreshes as easily as possible.

The LAEP guidance, as a nationally adopted model, would provide a clear framework within which to define this scope. This approach would offer significant complementarity to national energy policies underpinned by data. For example, heat network zoning and potentially providing a foundational basis for activities of RSPs in the future.

Energy Systems Catapult has conducted a range of data collation and analysis with respect to Local Area Energy Planning, including understanding how different sources of data materially impact on planning exercises and outcomes. We have also worked with partners to explore data use cases following planning, though these activities would need to be expanded to fully understand the wide range of available data in the national context, its current availability, and the potential implications on planning.

Current centres of excellence and independent work on data collation, use, standards, and quality should be leveraged to ensure learning from previous work and the use of data in planning is built upon. The outputs of this exercise should be widely disseminated, e.g. via Net Zero Go, and endorsed to create a common sector understanding.

Build Capacity

Recommendation 5:
DESNZ should build-out from existing centres of excellence, capacity, and capability support, to establish an advisory facility to support local authorities with whole energy systems Net Zero planning.

Why?
Some local authorities lack the capacity and capability to undertake and realise the benefits of a LAEP. This includes in understanding how to support, specifiy, deliver or make use of a LAEP.

Opportunity cost, duplication, and inefficiency in delivery of planning exercises can arise, due to a lack of a resourced expert advisory capacity to coordinate across wider geographical areas.

What are our desired outcomes?

Local authorities are provided with additional support to understand and deliver LAEP's, realising implementation and achieving the benefits that Local Area Energy Planning provides.

The national delivery of planning exercises is coordinated in close collaboration with places, to achieve maximum impact through the optimum approach, and efficiency and economies of scale with available funding.

Outcomes from planning exercises can be more readily understood at larger geographical scale, better enabling plans to progress to implementation and attract investment.

Proposed approach

Mobilise a technical advisory facility

DESNZ should build on existing whole energy systems planning centres of excellence, with experience of local to national planning to provide a structured and coordinated advisory service to local authorities. This independent and outcomes focused facility should aim to ensure consistency, integration, and efficient use of funding to undertake planning, helping accelerate the UKs transition to Net Zero at best value utilising a whole energy systems view. The facility should be aligned to existing structures of governance and capacity and capability building support for Local Authorities, for example the Net Zero Hubs in England.

This function should efficiently and proactively support local government to address gaps in understanding and capacity and deliver LAEP exercises and maximise their benefits. Assisting them to understand the principles, concepts and stages of Local Area Energy Planning, and how to coordinate, specify, manage, and evaluate delivery, leading into successful implementation.

It should help maximise the efficiency, value for money, and integration of local and regional funding with national funding. By maintaining an overview of planning activity nationally it would ensure that funding is deployed efficiently over different geographical scales, advising places and regions on the best options for their areas, including how to expand into full LAEP exercises from baselining or 'mapping' (Stage 1-3).

By building around existing independent centres of excellence with expertise, advisory experience from local to national, and connectivity with wider sector partners, new places undertaking planning exercises will benefit from the learning from pioneering projects. There is much existing learning to build upon, rather than repeat. Building around an understanding of already deployed projects, and regional and national scale approaches, will ensure that any new plans are complimentary and aligned.

Energy Systems Catapult's Net Zero Go platform is currently providing capacity and capability support to local authorities across whole energy system Net Zero topics, funded by DESNZ. Aligned to the Net Zero Hubs, Net Zero Go provides a means for areas to feed learning and resources back to support other areas. However, the approach and need described for Local Area Energy Planning specifically requires targeted and specifically resourced action.

Energy Systems Catapult has also developed valuable learning in the processes and stakeholder considerations involved in deployment of whole energy systems planning, across the national to local levels. For example, through advising Welsh Government on the roll out of LAEP across Wales.

LOCAL AREA ENERGY PLAN

For more information on undertaking a local area energy plan, click here

NET ZERO GO

Turn your Net Zero ambition into action with: Net Zero Go

Places are acting each day, many racing ahead with LAEPs whilst others are in danger of being left behind. This could lead to inefficient and uncoordinated investment in infrastructure and Net Zero project delivery which could drive up consumer bills.

Report Lead Author, Dr Anna Stegman,
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Energy Systems Catapult

Footnotes

[1] https://es.catapult.org.uk/guide/guidance-on-creating-a-local-area-energy-plan/

[2] https://www.theccc.org.uk/publication/2023-progress-report-to-parliament/

[3] https://www.ofgem.gov.uk/sites/default/files/2023-02/Future%20of%20local%20energy%20institutions%20and%20governance.pdf

[4] https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/Local%20Energy%20Report.pdf

[5] where Stage 1 is preparation for the LAEP including defining the boundary, identifying stakeholders, Stage 2 is stakeholder engagement and Stage 3 is modelling the current local energy system

[6] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1139133/annual-fuel-poverty-statistics-lilee-report-2023-2022-data.pdf

[7] https://www.ukri.org/wp-content/uploads/2022/03/IUK-090322-AcceleratingNetZeroDelivery-UnlockingBenefitsClimateActionUKCityRegions.pdf

[8] https://es.catapult.org.uk/guide/guidance-on-creating-a-local-area-energy-plan/

[9] https://cape.mysociety.org

[10] The Paris Agreement, 2015

[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1128689/mission-zero-independent-review.pdf(p191)

[12] https://www.theccc.org.uk/publication/2022-progress-report-to-parliament/

[13] https://www.uk100.org/sites/default/files/2023-04/UK100_Powers%20in%20Place_FINAL_26_April.pdf

[14] https://www.gov.uk/government/publications/finding-common-ground-integrating-data-science-and-innovation-for-better-use-of-land/finding-common-ground-integrating-data-science-and-innovation-for-better-use-of-land

[15] https://www.ofgem.gov.uk/sites/default/files/2023-02/Future%20of%20local%20energy%20institutions%20and%20governance.pdf

[16] https://www.regen.co.uk/wp-content/uploads/Planning-the-regional-energy-system-to-support-local-delivery-of-net-zero.pdf?utm_medium=email&_hsmi=258993994&_hsenc=p2ANqtz_6wH9yqKfQn9fJXLw_ovch-QkwjAH0OAvoesgXJw8zYJ31jj4bUlLeSIRiV9XdjnLZMygp0BQwNYuZJ4XsTWvcMNwkgkFhz9h2pm4__2lRuLqhWo&utm_content=258993994&utm_source=hs_email

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[18] https://es.catapult.org.uk/guide/guidance-on-creating-a-local-area-energy-plan/

[19] https://es.catapult.org.uk/report/the-future-of-local-area-energy-planning-in-the-uk/

[20] Net Zero Wales Carbon Budget 2 (2021-2025): Summary document (gov.wales)

[21] https://innovation.ukpowernetworks.co.uk/projects/collaborative-local-energy-optimisation/

[22] https://www.ofgem.gov.uk/publications/riio-ed2-final-determinations

[23] https://www.cse.org.uk/research-consultancy/consultancy-projects/local-area-energy-planning/

[24] https://www.ofgem.gov.uk/publications/ofgem-sets-out-proposals-transform-local-energy-systems

[25] https://carbon.coop/portfolio/greater-manchester-local-energy-market-gmlem/

[26] https://www.regen.co.uk/project/exploring-community-benefits-for-and-from-local-area-energy-planning/

[27] https://es.catapult.org.uk/guide/guidance-on-creating-a-local-area-energy-plan/

[28] https://iuk.ktn-uk.org/programme/net-zero-living/

[29] https://iuk.ktn-uk.org/news/fast-followers-accelerate-towards-net-zero/

[30] https://www.netzerogo.org.uk/s/

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[32] https://www.ukib.org.uk/local-authority-advisory-service

[33] https://www.gov.uk/government/publications/greater-manchester-combined-authority-trailblazer-deeper-devolution-deal

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[36] https://es.catapult.org.uk/report/governance-framework-for-coordinated-local-area-energy-planning/

[37] https://project-leo.co.uk/reports/project-leo-final-report-a-digest-of-key-learnings/

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[39] where Stage 1 is preparation for the LAEP including defining the boundary,identifying stakeholders, Stage 2 is stakeholder engagement and Stage 3 is modelling the current local energy system

[40] https://es.catapult.org.uk/report/governance-framework-for-coordinated-local-area-energy-planning/

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