

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Planning the regional energy system to support local delivery of net zero

Research on local authority perspectives



Regen is an independent not-for-profit centre of energy expertise and market insight whose mission is to transform the world's energy systems for a zero carbon future.



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Executive summary

Local authorities call for collaborative partnerships to create regional energy system plans

Regen has interviewed 13 local authorities to find out how regional energy system planning could integrate with local authorities' broader net zero leadership roles. This brief engagement exercise was designed to feed into Ofgem's consultation on proposals for a regional system planner.

The key finding was that local authorities would like to see a **collaborative partnership approach** to regional energy system planning. Growth plans, decarbonisation strategies and real projects are decided and delivered at a local level. Therefore, they want assurance that they will be represented in the regional planning process, for example, on a board that allows them to veto the plan.

Local authorities do not want a 'black box' process. They want it to be **iterative, transparent and open**. They would like better access to network information, such as investment plans, and to be able to feed in their system requirements.

Interviewees saw the potential for a more joined-up system planner role. There was support for a **whole system coordinator** and for an **escalation platform** to help resolve local issues.

There was consensus that greater impact could be achieved by a regional planner if it has **multidisciplinary skills and knowledge**, including the duties of local authorities.

All local authorities agreed that the boundaries for regional system plans should **align with political boundaries**.

A genuine whole-system approach needs to reflect the decisions and investments happening on the ground, which are strongly influenced by local policies. Plus, no local authority should have to work with more than one regional planner.

Engagement between the local authorities and network companies has improved significantly. Local authorities are keen to see this improve further, particularly at a strategic level, to enable more joined-up planning. They are concerned that time could be lost during the set-up of a new regional body and that things grind to a halt in the interim. They want reassurance that **progress made now will not be lost**.

They also asked for 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.

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Contents

Introduction	6
1. Current level of engagement	8
2. Objectives for regional planning	13
3. Process for regional planning	15
4. Capabilities and boundaries for regional planning	17
5. Action required now	19

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



How to use this document



Home

Return to the beginning of the document.



Glossary

Definitions of energy system terms and additional background information.



Arrows

Click forward and backwards through the document.

Sections

Click on the titles to navigate to different sections in the report.

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Introduction

Ofgem has proposed the creation of Regional System Planners (RSPs) to undertake regional energy system planning activities and coordinate the input of other actors in the process. Ofgem’s consultation on these proposals ran until 10 May.

The development of a new approach to coordination of energy system planning at a regional level will take time and will need to be guided by evidence as policy is developed and implemented.

Regen ran a stakeholder workshop on 23 March on local area energy planning on behalf of Ofgem, Innovate and the Department of Energy Security and Net Zero. A key message was that there has been insufficient focus on how planning the energy system at a regional level will integrate with local authorities’ broader net zero leadership roles.

It is important, therefore, to ensure consideration of energy system planning takes account of the experience local authorities have of engaging with network companies on how energy infrastructure can enable local democratic objectives for their place.

Regen undertook a short programme of stakeholder interviews on how energy system planning at a regional level should work with the broader local net zero landscape and what functions and governance this requires. This report sets out our findings.

The report is part of Regen’s thought leadership work. The work is kindly sponsored by Scottish and Southern Electricity Networks. However, the report sets out Regen’s conclusions and views alone.

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Methodology

The aim of this work is to contribute to the discussion about regional energy system planning alongside Ofgem's current consultation. This provided a very short window to carry out stakeholder research and limited the number of local authorities we were able to interview.

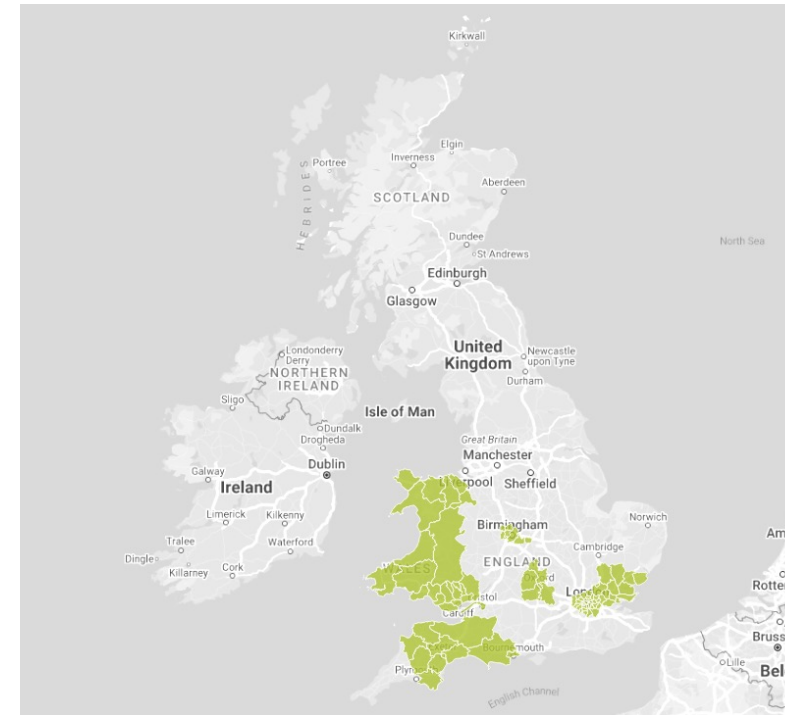
A total of 19 local authorities, one devolved government and one community energy group were invited to take part in interviews. These were chosen to provide a diverse mix of local authority types (combined authority, district authority etc.) and geographical locations.

Of the 21 invited, 13 were able to be interviewed over the course of two weeks.

The questions asked were predetermined, and a pre-read briefing document was sent ahead of the calls to ensure the interviewee could prepare their thoughts.

At the start of the interviews, we determined whether the local authority representative had any prior knowledge of Ofgem's proposed Regional Systems Planner role.

We have listed below all parties we invited to take part and highlighted those we interviewed.



Aberdeen City Council

Bournemouth, Christchurch and Poole Council

Bristol City Council/Bristol City Leap

Devon County Council

Dorset County Council

Dundee City Council

Essex County Council

Greater London Authority

Greater Manchester Combined Authority

Highlands Council

Isle of Wight Council

Low Carbon Hub (community energy group)

Oxford City Council

Oxfordshire County Council

Somerset County Council

South Gloucestershire

Swindon Borough Council

Welsh Government

West Midlands Combined Authority

Wiltshire County Council



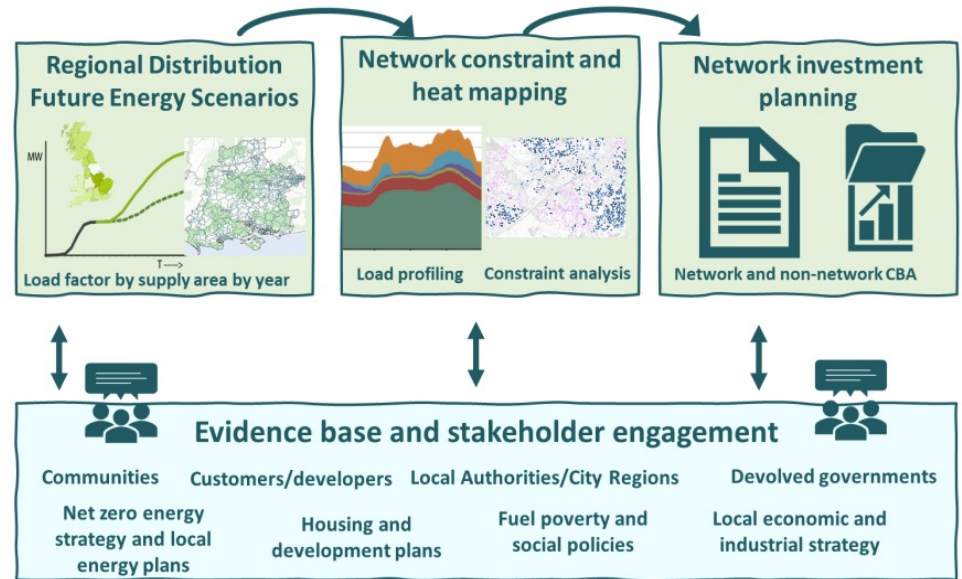
Current engagement between local authorities and energy networks

The Distribution Network Operators (DNOs) and Gas Distribution Networks (GDNs) undertake network planning for their distribution areas, developing detailed network development plans to inform network investment decisions.

There has been extensive development and innovation in these network planning processes in recent years to enable networks to respond to the rapidly changing energy system. All DNOs now carry out Distribution Future Energy Scenarios (DFES) processes.

Local authorities also undertake planning activities to support their decarbonisation objectives. These can take the form of Local Area Energy Plans (LAEPs) or can be more project specific, such as heat network plans.

Local authority plans can shape the networks' development plans through the DFES and local investment planning processes, as shown in the figure to the right, where the local plan has clear targets and strategy.



Extensive engagement has also been carried out in the development of the RIIO-2 business plans. Local authorities were one of many stakeholder groups that helped shape the network companies' strategic priorities for the next price control.

Targeted funding has been allocated in RIIO-2 to continue to improve the networks' offering to local authorities.

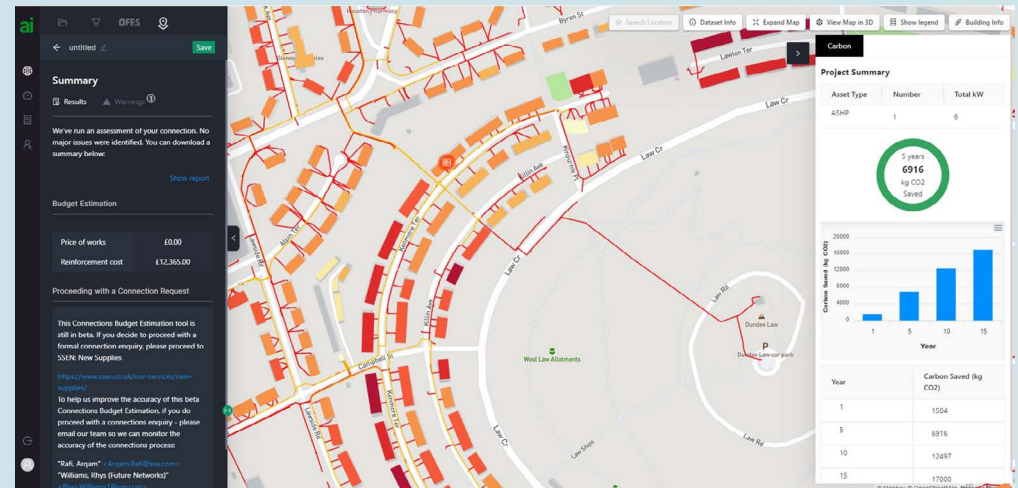
Case Study – Scottish and Southern Electricity Networks local authority engagement

For the RII0-ED2 price control period, starting in April 2023, SSEN has committed to the continued support of the development of Local Area Energy Plans through the provision of relevant data sets, regular strategic input and annual engagement with their DFES scenarios.

In addition, SSEN plan to provide additional targeted support to local authorities within their licence areas, including embedded support, to develop a coordinated and effective delivery strategy for Whole System and Net Zero initiatives that interact with the electricity network.

SSEN is also working in collaboration with Dundee City Council, through the RESOP project, and another four areas (Perth & Kinross, Oxfordshire, West London and West Sussex) in trialling a LAEP+ tool which overlays spatial and network data with other social-economic and energy markers. The tool provides a clear graphical interface to inform decision making and also acts as a simple template to build a whole system Local Area Energy Plan (LAEP).

SSEN Baseline Support	SSEN Additional Whole System Support
<i>For Local Authorities at an early stage pre-LAEP:</i>	<i>For Local Authorities with active LAEP development:</i>
<ul style="list-style-type: none"> • Input to DFES Scenarios • Participation in LAEP scoping • Open access to network data and support with interpretation • Access to LCT siting tools • Connections engagement • Innovation partnerships 	<ul style="list-style-type: none"> • Allocated or embedded technical expertise for projects and LAEP development • Support for pre-funding network feasibility • Detailed local area data sets and analysis • Support in navigating wider industry engagement





Current engagement between local authorities and energy networks

We asked interviewees how often they currently engage with gas and electricity networks on their local energy requirements.

We found there was a mixed response for engagement with the DNOs and virtually no engagement with the GDNs.

The devolved and combined authorities tended to have a more strategic relationship with the network companies than the county and district authorities. There were also better communication channels when a local authority was involved in a network innovation project.

Local authorities said they were able to have operational discussions with the DNOs on a project-by-project basis. However, they were often missing the constructive conversation about future growth and decarbonisation plans.

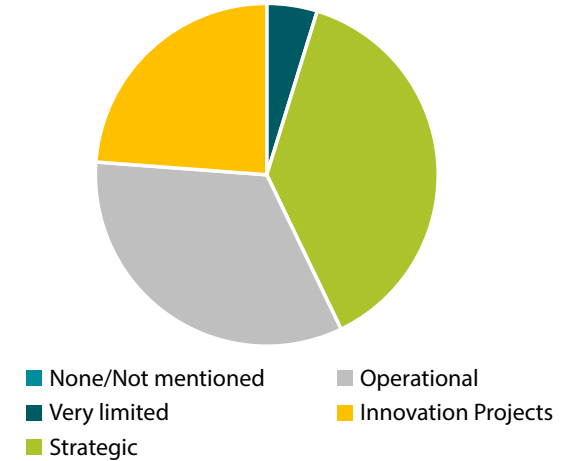
It is clear that local authorities' engagement with DNOs has significantly improved in recent years. However, there is still a lack of consistency in DNO engagement, limited contact with GDNs, and some difficulty in having a strategic conversation with the networks, which suggests there is room for improvement. How far this need will be addressed under the DNOs' new business plans is not yet clear, as they only commenced in April this year.



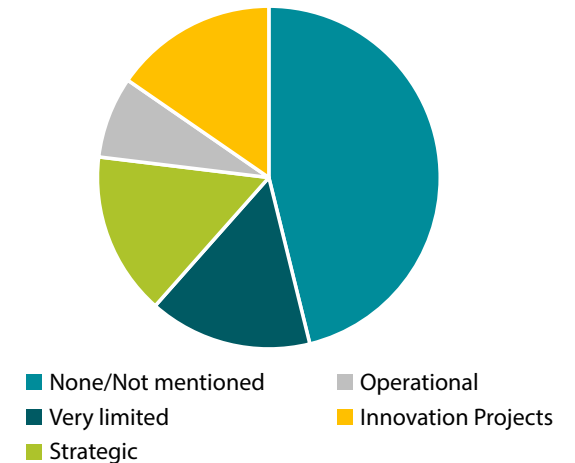
It's just a transactional relationship at the moment and it needs to be much more of a strategic one.

David White, Bristol City Leap

Types of engagement with DNOs



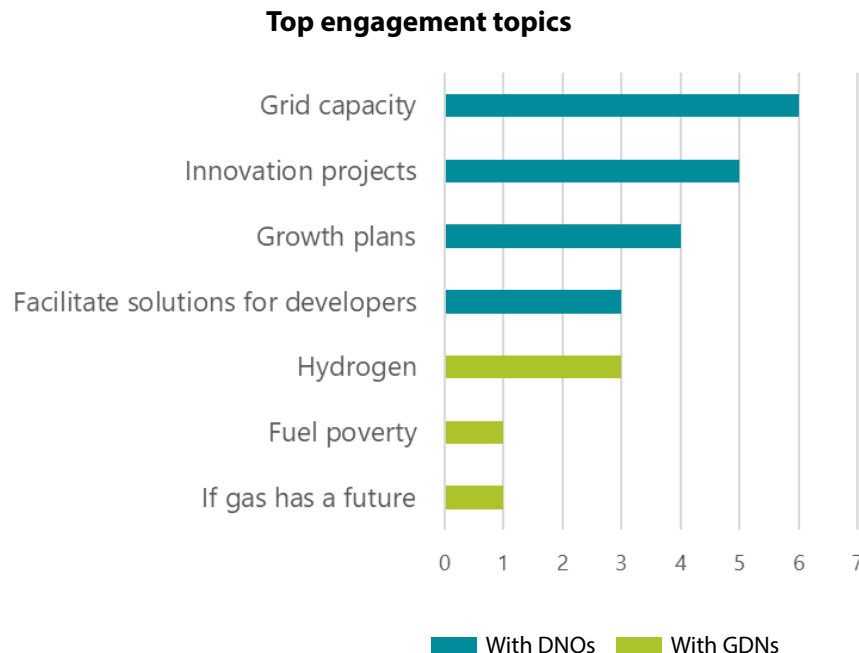
Types of engagement with GDNs





Key topics for engagement between local authorities and network companies

We asked interviewees what they talk about with the network companies. Grid capacity and barriers to connections was the most frequent response. This was followed by innovation projects (this may be due to the interview sample and may not be reflective of the UK). Four local authorities talked to their DNO about their growth plans and where network reinforcement was required.



“ **System planning needs to be objective. When future energy scenarios and models are prepared by organisations with an interest in a particular type of energy, it makes it difficult to know whether they are impartial.**

Doug Eltham, Devon County Council

“ **We engage with the DNOs all the time... primarily on the growth areas across London, looking at new development coming forward, where reinforcement is required, ensuring there's sufficient capacity on the network etc.**

Andrew McMunnigall, Greater London Authority

“ **I think what's always been missing is some level of governance and local accountability over our critical infrastructure needs.**

Steven Ford, Dorset County Council



Information flow between local authorities and energy networks

We asked interviewees about the information they require from the energy networks to achieve their objectives, as well as what information they would most want to be considered in planning energy system infrastructure.

Information local authorities want from the network companies:

- Future investment plans, so that they know where capacity will be increased, as well as the assumptions behind these plans to understand when decisions have been made
- Where there are constraints and capacity, as well as options for how to overcome constraints/access capacity
- GIS data is important for developing local energy plans
- Connections pipeline data is essential for understanding actual capacity - confidentiality presents a blocker and prevents a local authority from facilitating better queue management.

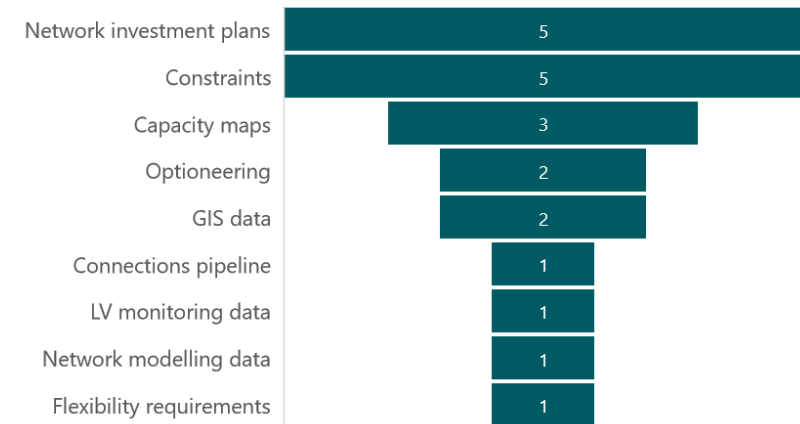
Much of this information is already available. However, local authorities do not always know where to find it or have the capability to use it fully.

Information the local authorities want to be considered in network planning:

- Growth plans and planning applications
- Decarbonisation plans/LAEPs and system requirements.

Not all local authorities have the resources to develop decarbonisation plans or actively engage with the networks.

Information required by LAs from the networks



“It’s more about understanding how they’ve come to their conclusions so we can test their assumptions and see whether or not they align with our assumptions.”

Matthew Montgomery, BCP Council

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Objectives of a regional plan for the energy system

We asked interviewees a broad question on what they thought a regional plan for the energy system needs to plan for.

The key message was the need to **strike the right balance between national and local ambitions**. Decisions to invest in low carbon technologies happen at a local level and therefore local plans must be considered in energy system planning, along with national targets.

Other messages were that regional plans:

- Need to be bottom-up and based on actual projects and plans rather than based on top-down modelling, as technology rollout is decentralised and market-led
- Should support the local authority to deliver local area energy plans (LAEPs) and incorporate existing LAEPs, which have drawn on extensive stakeholder engagement
- Should support greater coordination between different DNOs where local authority boundaries cross more than one license area
- Must be more accessible than the current DNO business plans, especially in relation to plans to invest in network reinforcement and what this means in terms of capacity and impact
- Need to take a whole system planning approach.

“ **The giveaway is in the title: ‘regional’.. it needs to take in a national target, while in reality reviewing against local plans as this is where the greater impact will take place.**

Sean Owen, Greater Manchester Combined Authority

“ **A whole systems plan requires agreement on a huge number of factors, by a range of actors, who are often incentivised to act individually. If agreement doesn’t emerge, the whole systems benefits will not be created. The RSP therefore needs to identify where these issues will emerge, due to current regulation or business interest, and help to address these at the early stages of set up.**

Chery Hiles, West of England Combined Authority

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Potential for a regional system plan to support wider objectives

We asked interviewees if there were other ways a regional energy system plan could support local authorities' net zero and wider economic and social objectives.

Some local authorities identified a potential facilitator or "whole system coordinator" role for a regional system planner to help them achieve their objectives. This would:

- Provide an enforcement system and an escalation platform to help resolve issues, to ensure a whole-system approach is taken and to make a recommendation when there are competing views
- Enable private network investment, such as to enable local authorities to take on some of the financial risks of network investment and to facilitate the development of private wire networks
- Support the creation of local energy markets as a strategic partner
- Facilitate coordination across network boundaries, e.g. trading capacity between DNOs to strategically unlock capacity
- Support a consistent approach to LAEPs, which can then consistently feed into the DFES.

There's a risk that it could be very energy networks-focused without strong enough consideration of the wider system and how you can facilitate proper planning and so on.

Andrew McMunnigall, Greater London Authority

As it stands, operational-level solutions are single vector. To support whole systems planning and delivery, the RSP could establish a cross-vector escalation process.

Chery Hiles, West of England Combined Authority

It would be advantageous to return a lot of that benefit locally through decentralised microgrid type solutions where we can attract private investment.

Matthew Montgomery, BCP Council

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Key features of a successful process to set a regional system plan

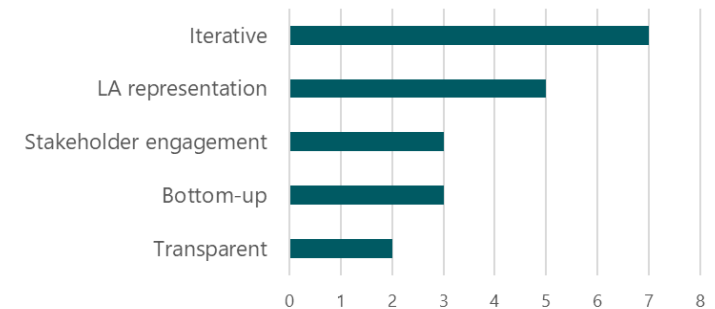
We asked interviewees what would be the key features of a successful process to set a regional energy system plan that supports local net zero.

The consensus was that local authorities need to be included in a **collaborative partnership** to develop and agree on a regional system plan. A shared view was seen as essential in delivering net zero, both at a local and national level.

Local authorities do not want a black box process. They want assurance that they will be represented in a regional partnership and that other stakeholders, such as community groups, are engaged. They prefer a bottom-up approach that reflects local decisions and investments.

Seven local authorities were clear that the process needs to be iterative to reflect how policy, local politics and markets are changing. Two more interviewees stressed the importance of an open and transparent planning process.

Frequency of key features raised by interviewees



“ System planners will need to come and talk to us. Engaging with the local authorities is a key part of the process. We’ve got a wealth of information about our local environment.

Ruth Harris, Oxford City Council

“ It has to be transparent and iterative. We do not want to feel that we’re just feeding information into a system or a process that’s then determining the outcome. There needs to be a genuine sense that we’re actually influencing it and helping to shape it.

Tom Day, Essex County Council

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



How local authorities should input to a regional system plan

We asked interviewees how they could provide local democratic input to a regional energy system plan.

All agreed that a strong local voice was essential for developing a regional system plan that reflects local net zero ambition and delivery.

The most frequent suggestion (by four local authorities) was the creation of a **board** where all local authorities can sign-off or veto a regional plan. A further two local authorities wanted an 'enhanced role', enabling them to veto a regional plan, but did not specify this should take place through a board.

Other suggestions included:

- Looking at the 'duty to cooperate' as a framework for local authority input
- Ensuring community groups are represented too
- Using existing LAEPs, which have local democratic input, as an important evidence base for a regional plan.



Local authorities want more than purely being consulted on. We want proper engagement where we can start to influence the agenda in a constructive way. We don't want our plans and future development visions to be lost due to an ad hoc approach to how capacity is taken up on the network.

Mike Garrity, Dorset County Council



I personally believe the regional system planner, the network operators and local authorities should all be on a governance board, ensuring local authorities have the same voting rights as the DNO and GDN, as the local authorities understand where the growth is actually going to take place.

Sean Owen, Greater Manchester Combined Authority

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Resources and capabilities required for a regional energy system plan

We asked interviewees what resources and capabilities were required to set a regional energy system plan that supports local net zero.

Greater impact can be achieved by a regional planner if it has:

- Multidisciplinary skills and knowledge, e.g. heat, transport, energy generation, energy efficiency
- Local authority knowledge and experience, e.g. development planning
- Stakeholder engagement skills
- A clear methodology that can be adapted to the specific geography
- Sufficient funding to ensure that expectations are met, and trust can be built.

The local authorities also require resources and capabilities to feed into a regional plan in a meaningful way. In some cases, local politicians will need to be persuaded of the importance of energy infrastructure for the growth and levelling up agenda.

“ **It will be really interesting for them to have some local authority experience; that might be difficult to achieve, but they do need a good knowledge of the planning system, the duties of local authorities, economic growth plans, transport plans...**

Tom Day, Essex County Council

“ **Need to understand land use planning, development processes, data experts, stakeholder engagement... people who understand buildings and retrofit.**

Andrew McMunnigall, Greater London Authority

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Potential boundaries for a regional energy system plan

We asked interviewees how the regional boundaries should be determined.

All agreed that the regions should **align with political boundaries** for three main reasons:

1. The political boundaries reflect where decisions and investments are made
2. No local authority should have to work with more than one regional planner. This is of particular importance to local authorities with more than one DNO or GDN
3. Using network boundaries would prioritise one form of energy over another.

Suggestions for boundaries included:

- Net Zero Hubs in England, which are already supporting local authorities in developing LAEPs
- Combined Authorities
- Local Enterprise Partnerships
- LAEP boundaries
- Devolved Administrations.

Two local authorities stated that the old regional boundaries should not be used, as they do not reflect current working relationships.

A further two local authorities stressed the importance of finding solutions to locally-specific network problems and were concerned that a regional approach would not be sufficient.

“ There needs to be a one-to-one relationship between the local authority and the RSP. You can't have a Council working with more than one RSP. That would not work.

Tom Day, Essex County Council

“ Regional is important when cross-local authority involvement is needed. But then everybody involved should expect to do deep dives to find solutions to specific problems.

Mairi Brookes, Low Carbon Hub

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



The need for urgent action

Over three-quarters of local authorities in the UK have declared a climate emergency, recognising the need for urgent action to transition to net zero. The creation of a new governance arrangement for regional system planning may take time.

The interviewees expressed concerns that progress could be lost if a regional system planner is created or that things grind to a halt in the interim. Network solutions often have a long lead time, making any further delays particularly concerning.

We asked local authorities how we can avoid inertia and continue to develop engagement between local authorities and energy networks whilst new arrangements are developed. There were three key suggestions:

1. Mandate a local integrated partnership approach to enable strategic conversations between networks and local authorities
2. Provide better support for local energy planning now, which could form the basis of a regional plan later
3. Require networks to invest more in their relationships with local authorities; for example, create account managers for each local authority so they have one point of contact.

The third point is already in motion with many DNOs investing in their offering to local authorities in this next price control.

It is important that time isn't lost during the setup of the RSP and that good practices and ongoing discussions are able to continue during any setup phase.

Cheryl Hiles, West of England Combined Authority

Concern they will go away into a dark room and define the RSP for the next three years and then come out to a more developed place... They need to build confidence that the work we do in the next few years to build good working relations with the network operators and develop local energy planning will not be lost.

Tom Day, Essex County Council

If we had standardised, replicable local energy plans, we would not lose the current inertia, as we'd have the detail across the country to accelerate delivery.

Sean Owen, Greater Manchester Combined Authority

Summary

Introduction

Current engagement

Objectives for regional planning

Process for regional planning

Capabilities and boundaries

Action required now



Glossary

Term	Description
DNO	Distribution Network Operator
DFES	Distribution Future Energy Scenarios, developed by the distribution networks
ESO	Electricity System Operator, owned by National Grid but operationally independent from the transmission operator
FES	Future Energy Scenarios, developed by the ESO
FSO	Future System Operator. Government is in the process of establishing the FSO, which will bring together the planning for the electricity and gas systems and build on the existing capabilities of the Electricity System Operator
GDN	Gas Distribution Network
LA	Local authority, including District, County, Unitary and Combined Authorities
LAEP	Local Area Energy Plan
Ofgem	energy regulator (office for gas and electricity markets)
RSP	Regional System Planner