Future Energy Landscapes:
A new approach to local energy planning

Design and rationale report

Rachel Coxcoon
Head of Local & Community Empowerment,
Centre for Sustainable Energy

CPRE fights for a better future for the English countryside. We work locally and nationally to protect, shape and enhance a beautiful, living countryside for everyone to value and enjoy.

5-11 Lavington Street
London SE1 0NZ

020 7981 2800

info@cpre.org.uk | www.cpre.org.uk

[f] @CampaigntoProtectRuralEngland

[t] @CPRE

Charity 1089685 | Company 4302973

The Centre for Sustainable Energy is an independent national charity that shares our knowledge and experience to help people change the way they think and act on energy.

3 St Peter's Court
Bedminster Parade, Bristol BS3 4AQ

0117 934 1400

info@cse.org.uk | www.cse.org.uk

[f] EnergySavingAdvice

[t] @cse_bristol

[▶] /csebristol

Charity 298740 | Company 2219673

Founded 1979

Acknowledgements

Contents

Introduction

Public attitude surveys repeatedly demonstrate high overall public support for renewable energy in the UK. Yet, once projects are proposed in a given location, they are often fiercely resisted.

This disjoint between high support for sustainable energy sources in theory, and strong resistance in practice is a direct result of the fact that communities often do not feel adequately involved and consulted on the proposed developments. Standard planning consultation and target-setting processes at the local authority level do not feel local enough at the community level, and new developments therefore often feel like an imposition. Existing planning processes do not provide the opportunity for communities to carefully and strategically consider how a low carbon transition in their area might happen. Detailed discussion only emerges in response to a planning application, and thus the local debate is limited to adversarial point-scoring over each individual development, creating a legacy of local divisions which can affect future proposals.

There is a pressing need to move beyond these barriers if the country is to make progress on mitigating and adapting to climate change, improving national energy security and tackling fuel poverty. The Centre for Sustainable Energy (CSE) and the Campaign to Protect Rural England (CPRE) believe there needs to be meaningful and deliberative community engagement on energy futures within communities at the very local level if a transition to a low carbon future is to be achieved in a way that is both timely and socially just, while minimising negative impacts on the landscape. A genuine energy transition requires better public understanding, considered consent and a strategic and inclusive approach to planning at the parish and community level. This goes against the current direction of travel for government policy-making on communities and energy, which is currently moving towards the district and supra-district scale. A move towards larger spatial geographies from an energy planning perspective runs the risk of entrenching existing views that energy planning is 'done to' local communities and that meaningful consent is not an element in the decision-making process.

The Future Energy Landscapes (FEL) project, a partnership between CSE and CPRE (see 'Project Partners'), attempts to do just that: it provides the means to facilitate more meaningful community engagement in the energy planning process, aimed at overcoming obstacles to a low and eventually zero carbon future[1]. We have developed a new community engagement methodology that allows local authorities and parish councils to develop defensible low carbon Local Plans with genuine local buy-in and robust planning consultation across their local communities. This methodology can:

- Be used by local government officials in search of sustainable and inclusive ways of working with communities to meet binding carbon targets.

- Support Local Planning Authorities in establishing energy policies, strategies and targets which have clear evidence of genuine local community involvement.

- Be used by neighbourhood planning groups and parish and town councils to demonstrate a clear vision to their Local Planning Authority on how they see a local energy transition happening in their community.

---

1   The UK ratified the Paris Agreement, which aims to limit global warming to below 2°C, in November 2016. Emissions pathways indicate that CO2 emissions will need to reach net zero by the 2050s to 2070s, along with deep reductions of all other greenhouse gases, in order to stay below 2°C. (To stay close to 1.5°C CO_2 emissions would need to reach net zero by the 2040s). www.theccc.org.uk/wp-content/uploads/2016/10/UK-climate-action-following-the-Paris-Agreement-Committee-on-Climate-Change-October-2016.pdf

What is the Future Energy Landscapes project?

The Future Energy Landscapes project is an attempt to develop, trial and refine a methodology that can produce a FEL community energy plan[2] for a given community from insightful, detailed and mature discussion on low carbon energy infrastructure in a given community, in the absence of the threat of imminent planning applications. To accomplish this we designed a new, deliberative community engagement methodology, based around two workshops separated by a phase of reflection. Fuller detail on each phase of the methodology is outlined later in this report.

Phase A: Initial workshop, full day

Phase B: Reflection period, over approximately 10 days

Phase C: Reconvening workshop, 2 hours

The Future Energy Landscapes project is based on the premise that there needs to be meaningful and deliberative engagement on energy futures within communities if a transition to a low carbon future is to be achieved in a way that is both timely and socially just. The energy generation infrastructure needed for a low carbon future is likely to be more decentralised than is currently the norm, thus requiring the direct consent of a much larger number of communities across the country than is the case presently. For this to occur, energy infrastructure development must be acceptable to local communities in the combined contexts of their social structures, economies and landscapes.

To date, decisions about energy infrastructure have been taken with very little involvement from the public beyond the statutory requirements of the planning system. Such decision-making tends to adopt short-term approaches to community involvement, often focused around the need to debate a 'live' planning application with a limited decision timetable. But a genuine energy transition requires better public understanding, considered consent and a strategic approach to energy planning at the local level.

Communities need to be given the thinking space to consider the options for low carbon transitions outside of the normal planning application processes. Space needs to be created and processes developed that allow consideration to be given to future energy infrastructure in a wider sense, rather than when the mind is focused on an individual application for a specific installation in a pre-determined location. The Future Energy Landscapes methodology provides a framework for those involved in plan-making to do this.

---

2   Future Energy Landscapes (FEL) community energy plan is essentially a snapshot of renewable energy options that workshop participants, representing a given community, think are suitable options for further investigation, and that could possibly be implemented on the ground. The plan is grounded to a large degree in actual local realities. The FEL community energy plan represents a basis for discussion, and could be fed into the evidence base for the development of a wider community energy plan (e.g. within the Local Plan developed by the Local Authority).

Project Partners

The Future Energy Landscapes community engagement methodology was designed and tested in two community trials by the Centre for Sustainable Energy (CSE), with match funding from the Campaign to Protect Rural England (CPRE). The partnership grew out of parallel pieces of work being undertaken by CPRE and CSE.

CPRE campaigns for a beautiful and living countryside, and fights to address the growing impacts of energy generation and use on the countryside and the climate. To avoid damaging impacts on the landscape, CPRE would therefore like to see the prioritisation of measures to reduce energy demand, encourage energy efficiency, and appropriately scaled and sited renewable technologies. This should go hand in hand with embracing inclusive strategies to encourage broad local conversations about what communities want from their energy system and allow communities to lead on developing solutions appropriate for their areas. Through the Future Energy Landscapes project, CPRE hopes meaningful and deliberative community engagement can be further encouraged, with the aim of promoting renewable energy infrastructure that is acceptable to communities in the context of their social structures, economies and landscapes.

CSE runs a support programme for communities engaged in Neighbourhood Planning, which aims to help people who are preparing Neighbourhood Plans to consider energy and climate change issues in the round, and produce supportive policy at the *very local level*[3] on those topics. CSE also works with a wide range of community groups who want to develop locally-owned renewable energy infrastructure, such as solar farms and hydro plants. The planning hurdles faced by such groups are not inconsiderable, and often stem from a lack of a supportive local policy framework within which planning applications will be decided. Without better methodologies for setting local energy policy that has genuine and broad local support, and facilitation from local government to assist neighbourhoods to develop renewable energy policies and strategies, these barriers are likely to remain. Through the Future Energy Landscapes project, CSE hoped to identify whether a method could be developed that could show national policy-makers that complex local energy planning processes that move beyond binary questions are possible, and should be encouraged.

CSE and CPRE were advised throughout the development of the Future Energy Landscapes workshops by Professors Patrick Devine-Wright[4] of the University of Exeter, and Doctor Karen Parkhill[5] of the University of York.

---

3   The 'very local level' means an individual ward, parish or (in urban areas) it can even be as small as a number of streets.

4   http://geography.exeter.ac.uk/staff/index.php?web_id=Patrick_Devine_Wright

5   www.york.ac.uk/environment/our-staff/karen-parkhill/

Developing the Future Energy Landscapes methodology

This report details the background and rationale for the development and testing of the FEL community engagement methodology, and the implications for local energy planning revealed by this project. This report is one of three components of the FEL materials. The second component is the 'FEL Case Studies' document, which sets out how the methodology was trialled and tested, and gives insight into the sort of community learning that takes place through using the FEL methodology, and the results that can be achieved. The third component is the resource pack, 'FEL Practitioners' Workshop Resources', that provides detailed instructions for practitioners who wish to replicate the community engagement process elsewhere. Both these can be accessed at www.cse.org.uk/FEL

The three Future Energy Landscapes components:

1   FEL Design and Rationale Report (this document)

2   FEL Case Studies

3   FEL Practitioners' Workshop Resources

The aim of the FEL project was to develop and trial a replicable and easy-to-use method that allows planning practitioners to run genuinely inclusive local energy planning processes, and facilitate meeting renewable energy targets'. The trials were designed to help us investigate some fundamental questions, including:

- In the absence of prior detailed knowledge on national targets around energy saving and energy generation, will communities' participants develop FEL community energy plans that are broadly in line with any relevant targets and policies at the national level?

- What common themes and principles emerge that could inform improved practice around plan-making for energy?

- Do community participants remain engaged with a process that requires attendance at more than one workshop?

- Are community participants willing and able to engage a wider network of friends, relatives and community peers in conversations about energy planning as a result of attending such workshops?

What is unique about the Future Energy Landscapes methodology?

The process of 'grounding in place' is a unique and fundamental part of the FEL community engagement methodology, resulting in FEL community energy plans that reflect local people's understanding of what will work, and is acceptable, in the place they call home. The FEL methodology is a deliberative participatory workshop format that helps participants develop their thinking around energy planning, informed by a consciously created and shared understanding of their community. Participants have the time to consider their community in terms of people, organisations, services, landscape and place (and what is important to them about all of these) before being asked to consider appropriate future energy transitions for their community.

Grounding in place cannot be shortcut, and it does not work at larger spatial geographies (such as whole local authority areas) because people need to relate their FEL community energy plan to the realities of the community dynamics and landscapes where they live.

Design rationale

Proponents of increased inclusion of renewables in the UK energy supply system consistently point to high public support for renewable energy in national surveys[6]. Yet, once projects are proposed in a given location, they often arouse impassioned and visceral local campaigns aimed at preventing them from going ahead (while there is often a reasonable level of at least passive local support). This disjoint between high levels of support for low carbon energy

generation in theory and lower levels of overall support when projects are proposed in practice (with that support frequently more qualified and nuanced) is often termed the social gap[7].

The existence of this 'social gap' inherently implies that, at some point in the process of translating the abstract idea of renewable energy into plans on the ground, something changes those supportive views. This change is the sum total of the obstacles to delivering a low carbon future at the local level, and without better understanding of the range of obstacles, and their interactions with each other, the situation will remain unchanged.

The range of obstacles falls into two groups. The first group ('People, place and values') brings together the issues that are inherent to the beliefs, concerns, likes and dislikes of individuals living in the community. The second group ('Approaches to community engagement') represents the obstacles that arise as a direct result of the choice of methods by which an external party (developer, local planning authority etc.) attempts to engage the community in learning and planning for energy. This relates to the level of support that community members are given to properly acquaint themselves with information and take the time to consider the options. Allowing participants a period of deliberation is a central part of the FEL methodology, which therefore draws on the Deliberative Polling technique discussed as part of 'Approaches to community engagement'.

People, place, and values

Opposition to renewable energy at the local level is often labelled as NIMBY-ism, but this dismissive pejorative is unhelpful, as it masks a broad range of personal drivers that may contribute to an individual's low level of support for a proposed energy development. A number of academic studies[8] have demonstrated that a wide range of factors affect an individual's likely level of support for a renewable energy project in their local area, but also that the views of a given individual are not always immutable; people's views on the acceptability of energy infrastructure can change between planned projects, and indeed across the time period of a single project's development. These factors are crucial considerations, which can cement or sway opinion (often overlooked in statutory consultations undertaken as part of a planning application), and are around issues of:

- **Place attachment** (an individual's personal, emotional bond to a place),

- **Distributive fairness** (that the benefits of a development accrue in way that appears transparent and reasonable),

- **Procedural justice** (that the process by which a development has happened is fair, as well as the outcome itself).

These considerations are also interlinked in determining whether an individual is likely to support a development in their area. Whether or not a proposal for a new energy development is seen as being imposed upon an area without genuine consultation can affect an individual's conception of whether it will damage their local 'place'. Similarly, proposals for local energy development may be seen as an opportunity if considerable benefits will be accrued locally, thereby considering fairness and place attachment (for example reinvesting the profits of a wind farm into local initiatives). In such a case, place-protective resistance could be absent, whereas when no local benefits are accrued the place-protective behaviours often come to the fore. Forming a full understanding of local views formed by such considerations is a key part of adhering to planning best-practice (as laid out in the National Planning Policy Framework (NPPF)[9] and Planning Practice Guidance (PPG)[10]). However, such values-based considerations are often absent from planning processes in practice.

The multi-faceted nature of how individuals form views on the future development of their locality underpins the need for more place-sensitive and nuanced approaches to local energy planning, and helps explain the disjoint between simple expressions of support for 'more sustainable energy' at the national level and more qualified support (or outright opposition) to specific projects at the local level.

The FEL methodology allows time for community participants to work through issues such as 'how' and 'by whom' should energy development be carried out in their area at the same time as looking at 'what' and 'where'. These former considerations are not normally a part of local authority energy planning (where it is done at all), which

leaves the questions of procedural and distributive fairness unanswered until the point at which local projects are proposed by a developer, thus increasing the chances that they will face opposition.

Approaches to community engagement

People generally have limited understanding of how energy is generated and delivered to their community, and even at the household level, personal 'energy literacy' can be surprisingly low. Generally speaking, members of the public struggle to give an approximation of the average household's energy consumption, to roughly estimate the split between household heat and electricity demand, or to scale up household energy demand to the size of their community.

However, providing the space for collective learning on energy supply and demand as part of plan-making processes has clear benefits. There is good evidence that ceding power to local communities over decision-making on energy infrastructure often enhances their understanding of both the development(s) in question, and the wider societal or environmental issues that create the need for those developments[11,12,13]. By engaging communities in more detailed considerations of the trade-offs that need to be made to develop a secure and sustainable energy supply and having the confidence to relinquish control of the process to communities in much larger measure than is currently the norm), a process of collective learning takes place. This leaves a community better informed and improves the social and environmental outcomes of the decisions made, for example by resulting in alternative ownership models for energy infrastructure or more ambitious generating capacity.[14,15,16,17]

Yet, despite this evidence, most public consultations on energy (and other major infrastructure) tend to be designed around a didactic process designed to lead participants quickly to the 'correct' answer, and secure agreement for a previously determined plan, rather than collaboratively develop that plan from the outset. This presents obstacles to successfully engaging people in learning about and planning for energy. The FEL community engagement methodology turns that approach on its head.

Deliberative polling

The concept of a transition to a low carbon future is highly complex and thus ill-suited to binary opinion polls that ask questions such as 'should we have more sustainable energy sources?', and to light-touch consultation procedures designed to inform rather than engage. The design of the Future Energy Landscapes workshops therefore also took inspiration from the principles of 'Deliberative Polling', a now trademarked public opinion polling technique developed by James Fishkin at the Centre for Deliberative Democracy at Stanford University in 1988[18]. Deliberative Polling is based on the premise that the public are unable to give considered answers to complex questions because they do not have the time or the information to consider the inherent trade-offs – in this case trade-offs related to planning for complex decisions.

True Deliberative Polling often includes a large, randomly sampled telephone or postal poll, followed by the selection of a sub-set of those polled to attend a 'weekend retreat' to discuss the issues further in facilitated workshop sessions. Once there, participants are provided with balanced briefing information and experts are invited to present differing points of view during debate sessions over the weekend. Following this process, the attendees are re-polled. The differences in their responses represent the effect of both access to information and time to reflect and consider, in essence the difference between responses given when in a state of 'rational ignorance' and 'rational awareness.'[19] Deliberative Polling has been used to investigate sensitive issues of national importance, such as the future of religious segregated schooling in Northern Ireland, or the treatment of the Roma children in the Bulgarian education system.

The Deliberative Polling method is a resource intensive process, the end result of which is to understand the informed opinion of a group of participants that are representative of their wider 'community'. Deliberative Polling's foundation of allowing participants the time to access detailed information, learn about the issues, and have time to reflect on their thoughts, informed the development of the FEL methodology. This is crucial as, without giving community participants the time to discuss and reflect on the 'how' and 'by whom' questions relating to local

development, major obstacles to local energy development remain. Moreover, the FEL methodology was shaped by the five key guiding principles of the Deliberative Polling process:

- Representative Sampling – ensuring that the participants in the process represent as closely as possible the wider community in question.

- Piloting – testing questions and approaches to refine the full engagement process.

- Innovative engagement practices – using a mixture of delivery and learning styles to maintain interest and enthusiasm.

- Thoroughness and balance of informative materials – avoiding biased representation of facts, such as presenting renewable energy as having only benign impacts on a local area.

- Effective facilitation – using experienced facilitators to ensure the views of all participants are heard and incorporated.

Further detail on how we applied these principles to the development of the Future Energy Landscapes community engagement methodology can be found in Appendix A.

6   BEIS (2016) ENERGY AND CLIMATE CHANGE PUBLIC ATTITUDES TRACKER- wave 18

7   http://bit.ly/2bPKReG Bell et al (2005). The 'Social Gap' in wind farm siting, Environmental Politics, Vol. 14, No. 4, pp. 460 – 477.

8   Full references for a range of studies on these issues are given in Appendix C.

9   Department for Communities and Local Government (2012) NPPF, paragraph 98.

10   Department for Communities and Local Government (2014) PPG, section Developing a strategy for renewable and low carbon energy

11   Wolsink M. Wind power implementation. The nature of public attitudes: equity and fairness instead of 'backyard motives'. Renew Sustain Energy Rev. 2007; 11:1188–207.

12   Walker G, Devine-Wright P. Community renewable energy: What should it mean? Energy Policy. 2008; 36(2):497–500.

13   Van der Horst D. Social enterprise and renewable energy: emerging initiatives and communities of practice. Soc Enterp J. 2008; 4(3):171–85.

14   Devine-Wright P. Public engagement with large-scale renewable energy technologies: breaking the cycle of NIMBYism. Wiley Interdiscip Rev Clim Chang. 2011; 2(1):19–26.

15   Few R, Brown K, Tompkins EL. Public participation and climate change adaptation: avoiding the illusion of inclusion. Clim Policy. 2007; 7(1):46–59.

16   Walker G, Devine-Wright P. Community renewable energy: What should it mean? Energy Policy. 2008; 36(2):497–500.

17   Webler T, Kastenholz H, Renn O. Public participation in impact assessment: a social learning perspective. Environ Impact Assess Rev. 1995; 15(5):443–63

18   http://cdd.stanford.edu/what-is-deliberative-polling/

19   If we assume that individuals act rationally (i.e. make decisions that they believe will lead to the best outcome for themselves, their family or their community) then 'rational ignorance' and 'rational awareness' is the difference between making a rational decision based on limited information and understanding on the one hand and a full understanding of the issues on the other.

Components of the Future Energy Landscapes Methodology

Development of the FEL methodology was informed by the elements that comprise the obstacles discussed in the 'Design rationale', and the need to explore, analyse, understand and address these barriers not only in a theoretical sense but in a real life community. Aimed at providing the best possible means to overcome opposition to local energy projects, recruitment for FEL workshops needs to be broad and inclusive, to ensure attendance from a representative cross-section of the community. The FEL methodology is made up of three phases, detailed below.

Phase A (full-day workshop): Facilitated exploration of people, place and energy

The Phase A workshop is designed as a full day (7 hour) event, much of which is focused on 'grounding' the participants as much as possible in their local area before asking them to think about transitions to a low carbon energy system. This 'grounding in place' is crucial because existing approaches to energy planning operate at a spatial geography that does not relate to any genuine sense of community for the people living there. Since evidence suggests that energy planning can be more productive if there is genuine community control of the process, then 'genuine communities' need to be the spatial geography at which detailed consultation is carried out, which brings us right back to the 'people, place and values' obstacles previously described.

Local Authority areas are useful administrative units, but they are not communities in their own right. Local authority-level energy planning (and its predecessor, regional energy planning) both suffer from the same drawback; an energy strategy can be developed that has involved little or no site-specific discussion. By contrast, the FEL methodology works at the very local level, and recognises that there are multiple and interrelated elements that contribute to sense of community:

- People (power structures, individuals and organisations of influence, social groups).

- Services (shops and transport links).

- Places (landscape[20] and land management practices).

- Employment (how local people historically earned an income and how things have changed).

Much of the Phase A workshop in the FEL process is devoted to exploring these non-energy issues, including annotating a large-scale community map with key elements (e.g. places, groups) that are important to participants.

Only once this broader contextual scene-setting is complete does the methodology introduce discussion around energy. Firstly, community participants discuss their own energy use before considering how that differs from the energy consumption patterns of their predecessors. An exploration of the energy infrastructure that already exists in the area is then carried out, before the final session workshop, which is taken up with developing an energy plan for the community, using the 'Community Energy Saving And Renewables (CESAR) tool' (see pages 14-15). This tool uses picture cards and information on energy generation and saving technologies, alongside data on real energy demand for the area in question to allow participants to consider a range of sustainable energy solutions and put together a plan in the context of their own energy demand and local resources.

The set-up of the Phase A workshop is summarised in the table opposite[21].

(A full workshop timetable with detailed facilitator notes is available as part of the FEL – Practitioners' Workshop Resources pack).

Part 1	GROUNDING IN PLACE
THEME A	CONTEXT & INTRODUCTIONS
Session A1	General introductions to the research **(15 mins)** *To lay out the purpose of the workshop and explain the partners behind it.*
Session A2	Personal narratives and histories **(25 mins)** *So that all participants are familiar with each other, when and how they came to live in the community, sharing their likes and dislikes about the community.*
THEME B	PLACES & SERVICES
Session B1	Personal maps **(15 mins)** *To understand which key places are important to people, whether the extent and boundary of the community is viewed similarly by most people, through the drawing and annotating of personal maps of the community.*
Session B2	Community maps and facilitated discussion **(45 mins)** *To allow the participants to develop a shared understanding of the places and services that are important to others, and why, through discussion of the personal maps and group annotation of a large-scale community map. To understand what participants think the community needs, how it has changed, and how it might change in the future.*
THEME C	LANDSCAPE & LAND MANAGEMENT
Session C1	Emotional responses to landscape **(15 mins)** *To investigate whether participants have broadly positive or negative responses to the landscape, and to understand whether there are shared perceptions or a range of interpretations of the landscape.*
Session C2	Facilitated discussion **(25 mins)** *To understand what conception there is of how the land is managed, how it comes to look as it does, what is driving landscape change and how people feel about that. This session also encourages discussion about how people access and use the local landscape and how free they feel to do so.*
THEME D	PEOPLE & ORGANISATIONS: POWER, INFLUENCE & ENTHUSIASM
Session D1	Identifying power structures **(15 mins)** *To understand whether there is consensus on which individuals and organisations affect and effect change locally, and whether this is progressive or restrictive.*
Session D2	Facilitated discussion – who influences local development? **(15 mins)** *This examines whether different types of development or activity are considered to be driven by, or opposed by different groups or people, or indeed whether some types of local activity or development have no champion where one is needed.*
Part 1	ENERGY: PAST, PRESENT & FUTURE
THEME E	COMMUNITY ENERGY USE
Session E1	Personal energy narratives **(15 mins)** *To understand how participants use energy in daily life, and whether they understand the split between their consumption of energy for heating and other needs. To build an understanding of the general split of household energy use in the community and the UK.*
Session E2	Historical energy narratives **(15 mins)** *To explore how and why household energy use and supply has changed over the past 80-100 years.*
THEME F	ENERGY & LANDSCAPE
Session F1	Energy in the landscape – present **(20 mins)** *To explore how energy supply has shaped the local landscape to date.*
Session F2	Energy in the landscape - future **(15 mins)** *To explore perceptions of how energy supply and energy saving could alter the landscape in the future, and drivers for transitioning to an alternative energy system.*
THEME G	CREATING A FEL COMMUNITY ENERGY PLAN
Session G1	Using the CESAR tool to produce a 'FEL community energy plan' **(115 mins)** *To introduce participants to a range of low carbon energy generation options and energy saving measures, and to allow them to select and discuss those which they think could be appropriate locally, along with discussion on how and by whom they would like to see any such schemes developed.*

The Community Energy Saving Renewables (CESAR) tool

The CESAR tool is used in the workshops to help the participants develop their FEL Energy Plan. An earlier version of the tool was developed by CSE in 2011 as a very local version of the Department of Energy and Climate Change 'My2050' tool[22]. It is important to explain that the online 'My2050' tool allows participants to test scenarios for energy generation and energy saving at the national level by using a series of sliders in the style of a graphic equaliser. In this way, the participant can add more or less renewable energy, nuclear power, energy saving measures and so on, and see if they can devise an optimum mix that will meet the 2050 carbon targets. My2050 is often used as a tool for raising awareness of future energy policy options, but while it provides a useful illustration of the complex trade-offs that might need to be made when planning at the national level, it nonetheless suffers from the major drawback that there is no connection for the participant to their local level. For example, while the participant can select greatly increased wind power or biofuel production, or a huge increase in nuclear capacity, there is no way of specifying exactly where such infrastructure would go; in essence, the participants is allocating new energy infrastructure in someone else's back yard, without any need for local consultation.

The CESAR tool adapted for the FEL methodology differs in that it requires participants to consider potential siting for low carbon energy generation installations (and indeed, to have enough local knowledge that they can, with prompting, consider issues such as proximity to grid or sources of feedstock). It also includes details of energy saving options that could be applied to buildings in the community. The tool enables participants not only to learn quickly the basic principles of a wide range of energy generation and energy saving techniques that might be deployed, but also to discuss their placement in the immediate local landscape or their effects on local vernacular architecture (e.g. in the case of external solid wall insulation).

CESAR does not currently include considerations of energy storage, because the market is insufficiently developed to usefully characterise storage options at the community scale. Considerations of 'round trip efficiencies' (the ratio of energy put in to energy retrieved from storage), length and stability of power purchase agreement contracts and the investment, technical and operational risks associated with storage projects at this time mean that including them within the CESAR tool could be highly misleading to the uninitiated, leading to the creation of FEL community energy plans that are not grounded in realisable realities. It would involve combining untested and emerging storage options with established renewable generation options that can earn revenue from government-backed, inflation-linked schemes linked to a mature electricity market, using proven technology with insurable performance characteristics[23].

CESAR is made up of a series of large picture cards depicting a range of energy generation and energy saving technologies split into colour-coded categories for electricity, heat, and energy saving. In the case of generation, the participants have the option of different scales. In the case of energy saving, the cards represent a percentage of the local households adopting a given set of measures.

A spreadsheet accompanies the CESAR tool, which is projected onto a wall near where the participants are using the cards. Research is carried out in advance in order to populate the spreadsheet with the energy demand of the community in question, and some tailoring of the tool can also be carried out by the facilitator[24] beforehand so as to ensure that the types and amounts of renewable energy "on offer" are realistic and have some prospect of being technically feasible on the ground in that community. When participants select a card, discuss it

Anaerobic Digestion

- 90 kW installation
- Provides electricity for approx. 175 homes
- Can provide heat for approx. 65 homes
- Around £650,000 to install plus additional £400,000 for heat delivery

Estimated i...

Micro Hydro

...lation
...r a single home
...5,000 to install

...ome

...ar from FiT and export tariff +

Domestic Solar thermal

- 3.5m^2 installation
- Can provide most hot
- Around £3,500 to inst

Estimated income
- Approx. £250 per year from savings

Annual CO_2 savings
- 540 kg per year

Energy Saving
Old homes - High cost

- Installing a condensing boiler and loft insulation
- Saves approx. 25% of buildings energy
- Estimated cost of £3250

Estimated savings
- Approx. £238 in fuel savings

and decide that they want to include it in their plan, it is entered into the spreadsheet, which gives them an illustration of how much of their current energy demand that selection would affect. This constant referencing back to energy demand is a crucial part of the learning within this process.

Participants are encouraged to discuss choosing particular technologies by the means of questions listed below:

"Where could this go?"

"Who would this affect most?"

"Who would drive a project like this forward around here?"

"Is this acceptable in our landscape?"

"How does technology X compare with technology Y? Do we need both?"

"How will this restrict access to the land?"

"Who else would need to be consulted on this?"

"Who would own and manage this?"

"How much does this reduce our demand?"

"Is this meeting just our demand, or that of a wider area?"

"How could local policy be used to deliver this?"

Participants use the large community map (which will have already been heavily annotated in the earlier part of the day) to note potential locations for generation technologies, starting them on the path of deciding which locations are more or less sensitive to new development, and who would need to be consulted to make such a project happen. All land within the community boundary defined by the map (and agreed by the participants) is included in the discussion, both public and private, and participants are encouraged to think about who owns the land when naming locations.

The results are very informative; participants tend to move to mature discussion relatively early on about actual impacts – visual impact, effects on tourism and trade, local transport impacts (in the case of anaerobic digestion (AD) and biomass), as well as trade-offs between different approaches and forms of ownership. Participants also often move into the early stages of what could be considered 'stakeholder mapping' when implementing the tool – individual landowners are named, key likely supporters or objectors are mentioned and local sources of feedstock discussed.

During the CESAR session, the participants draw on some of the discussion from earlier sessions in the day, pulling in their previously expressed views on the importance of landscape, who the key participants would be in any energy development, how they might bring developers proactively in to support them in the delivery of an energy plan, and what role the local planning authority might play.

The resulting first version[25] of the FEL community energy plan is essentially a snapshot of options that the participants think are suitable for further investigation or wider community engagement, and could be implemented on the ground. This FEL community energy plan represents a starting point, a basis for discussion, and something that could be usefully fed into the evidence base for the development of a wider community energy plan (e.g. within the Local Plan developed by the Local planning authority).

What is crucial is that the FEL community energy plan that emerges is grounded to a large degree in actual local realities: the morning sessions leading up to the use of the CESAR tool enabled participants to reflect on their local area and community, and develop a shared understanding of what is valued by themselves and others. In addition, the morning sessions provide the workshop facilitator with contextual references to draw on in the CESAR tool session. The facilitator prompts the group to think about what technologies, what locations, what development process and what ownership and benefit distribution structure would be appropriate for the different energy generation and energy saving initiatives they bring to the table while developing their FEL community energy plan.

As a result, using CESAR to develop a FEL community energy plan begins the process of addressing the key obstacles relating to procedural and distributive fairness and place-protective behaviours that are described in the Design Rationale section. Participants debate the barriers to some development, the acceptability of others, and the trade-offs that need to be made via discussion of some of the wider local realities. The fact that a wide range of energy generating technologies (at different scales), and energy saving options are on the table, and that the plan is arrived outside of the adversarial debating positions that are adopted whenever a live planning application is under discussion, helps to drive a wide debate about all potential options, rather than concentrating on a single technology in a specific location.

Phase B (homework): reflection and wider discussion

Drawing on the key design principles of the Deliberative Polling methodology outlined above, a principal design element of the FEL methodology is to encourage reflection ('deliberation') on the outcomes of the first workshop before asking participants to reconvene for further discussion and consideration of their proposed energy plan. This deliberation is encouraged by asking participants to reflect on the thought processes of the first workshop, and discuss their views in a second workshop approximately ten days later. To provide focus for this deliberative process, community participants are asked to carry out simple 'homework' tasks between the two workshops:

- Reflect on and speak to family and friends about what was discussed in the first workshop in terms of community, landscape value and history, and drivers for transitioning to new forms of energy generation.

- Reflect on and speak to family and friends about the outcomes of using the CESAR tool, in particular the wider acceptability of the plan that they as workshop participants have arrived at.

- Bring something back to the follow-up workshop that was inspired by the first workshop; this could be an object, photograph, story or thoughts (either their own or something that they gleaned from speaking with others).

Phase C (second workshop): reconvening, reflecting, reconsidering

The Phase C workshop is designed to be short enough to fit into a weekday evening, lasting two hours. Between the two workshops, the facilitator needs to analyse the outputs of the Phase A workshop (whether that is transcribing full recordings[26] or typing up flipchart outputs), and that material, along with a spreadsheet version of the energy plan is used to create summaries of the views expressed in the Phase A workshop. It is important that these are reflected back to the participants at the beginning of the Phase C workshop, and that they have the opportunity to alter the summaries if they do not feel these accurately represent what was discussed. Once this is done, the workshop moves on to considering the discussions participants have had as individuals with other members of their community in the period between the two workshops.

The energy plan is then re-visited for further discussion, firstly to compare it with existing national and international targets and see whether these alter the views of the group[27], but also to discuss if and how the plan should be changed to take into account the views of the wider community that the participants have sought as part of their homework. The participants are also asked to discuss their views on 'hosting' energy infrastructure that does not serve immediately local needs, and under what circumstances (if any) they would find such development acceptable. Discussions around national and international targets and the potential for local cooperation and 'hosting' arrangements again feed back into the two types of obstacles to better community energy planning identified in the Design Rationale. People's views on a fair and transparent development process and distribution of benefits tend to come to the fore. Finally, there is an opportunity to discuss the next steps – how the energy plan could be taken forward, and to invite any of the participants to get involved in later stages of policy-making.

| Session 1	Introductions (10 mins)
	Reminding participants of the aim of the workshops
Session 2	Summarising and reviewing discussion from full day workshop (15 mins)
	To recap and secure agreement from all participants that the summary of the previous workshop accurately summarised their views.

Session 3   Exploration of individual deliberations undertaken since first workshop (35 mins)
To explore what thoughts and conversations the participants have had since the previous workshop.

Session 4   Discussion of CESAR tool outputs and national/international targets (45 mins)
To put the CESAR tool outputs in the context of local, national and international targets and explore reactions to this. To explore whether the participants feel their plan is still acceptable given their discussions with peers in the community, and personal deliberations between the workshops. To discuss whether they feel they could (or should) host infrastructure that does **not serve immediately local needs.**

Session 5   Next steps (15 mins)
To plan how to take forward the process, e.g. with further workshops, engaging with wider stakeholders etc).

20   The definition of 'landscape' used is that of the European Landscape Convention (2000): 'Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.' It includes specific forms of landscape, such as townscapes, which are defined as 'areas where buildings and related infrastructure are the dominant components (GLVIA, n.d.)'.

21   This is the revised timetable and session plan, based on refinements made following the trials, through which we learned that some sessions needed to be longer and others could be cut or shortened. A detailed version with facilitator notes can be found at www.cse.org.uk/FEL

22   http://my2050.decc.gov.uk/

23   Community scale energy storage issues are explored in depth in a forthcoming CSE report for DECC/BEIS, due for publication in 2017.

24   Guidance on finding the key census and government energy statistics for the CESAR spreadsheet is given in the FEL Practitioner's Workshop Resources, along with suggestions for tailoring the range of technologies available to select.

25   The FEL community energy plan can be updated or adjusted in the second workshop.

26   For the purposes of the trials, our workshops were recorded and fully transcribed, however this may not be appropriate or cost-effective for local authorities or local councils. Guidance on using standard facilitation techniques to record outputs onto flipcharts during the workshops is provided in the facilitators' guide which accompanies this report.

27   Discussion of national or international targets is purposely avoided during the Phase A workshops (unless a participant directly asks). This is because laying out targets at the outset is likely to lead to a 'game-playing' approach during the CESAR tool session, where the broad and holistic discussion of all options is limited or made subservient to an attempt to reach a certain target. In both community trials of the workshop methodology, the participants either met or exceeded current EU Renewables Directive targets without being told them beforehand.

Applied value of the FEL methodology

The development of the FEL methodology was informed by the need to overcome resistance and adversarial attitudes towards local energy planning in order to work towards a low carbon future, improved energy security, and reduced fuel poverty (see graphic below). Meaningful and deliberative community engagement is key to identifying, understanding, and addressing obstacles related to 'people, place, and values' and 'approaches to community engagement; it is therefore central to the FEL methodology.

Top-down planning ●●●●●●●● ➤ Local resistance
Adversarial attitudes

Meaningful and deliberative community engagement ●●●●●●●● ➤ Timely and socially just transition to ... **Low-carbon future**
Improved energy security
Reduced fuel poverty
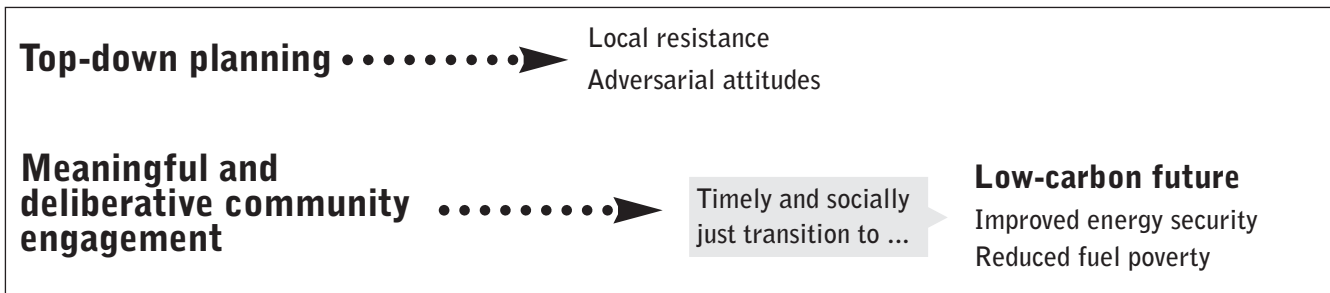
Applying the FEL methodology to local plan making

Local objections to the siting and scale of low carbon energy infrastructure do not appear to have changed in response to the development over the last decade of apparently sophisticated methodologies for building low carbon energy strategies into local plans. The Department for Communities and Local Government (DCLG)'s Planning Practice Guidance on renewable and low carbon energy includes guidance on how to develop a positive strategy to increase the supply and use of green energy. The guidance clearly states that the planning concerns of local communities are important and should be properly heard, as well as encouraging local planning authorities to share relevant evidence that may assist local communities wishing to develop a community energy plan as part of a neighbourhood plan[28].

The PPG also links to the methodology produced by the former Department of Energy & Climate Change[29] for carrying out desktop assessments of the capacity for renewable energy development in a given area (known in the industry as the 'SQW methodology').[30] The SQW methodology (and similar approaches) has been used to determine the high-level targets on renewable energy used in many local plans. These targets are shared with communities as part of the wider consultation on the vision and objectives determined for the local authority area as laid out in the draft local plan, but local communities are seldom, if ever, involved in the setting of these targets to begin with. This leads to resentment and opposition when project proposals begin to emerge that are in line with a high-level target, but may represent the first expression of how the target could be implemented on the ground and in a particular community.

Local planning authorities at an early stage of local plan development could use FEL methodology to generate a series of FEL community energy plans that can be used as part of the evidence base underpinning the identification of key issues and the subsequent drafting of a vision and objectives for the local authority as a whole. This could either be done in isolation from, or in conjunction with, a desk-top study using the SQW methodology or similar, to bring more community-scale realism to the production of the evidence base. Where a local plan is already in an advanced stage of preparation, or already adopted, the FEL methodology can alternatively be used to develop the evidence base for Supplementary Planning Documents on low carbon energy.

Testing the FEL methodology

We trialled and fine-tuned the methodology to ensure its applied value for developing genuinely inclusive local energy plans. During early 2016, the methodology was trialled in two rural communities in England (Congresbury in Somerset and Moreton in Marsh in Gloucestershire)[31]. The methodology worked well and needed only minor adjustments after the first trial, and the full practitioner's guide that accompanies this report incorporates any alterations that were found to be needed.

The trials demonstrated that when people with little background in energy issues are given the opportunity to discuss energy planning for their community away from the pressures of existing local planning applications, mature and extensive discussions can result, and ambitious community scale energy plans can be developed. These FEL community energy plans can then be used to inform the development of neighbourhood plans, local plans, or to inform wider energy strategies such as those developed by sub-national bodies, typically combined authorities. The trials also identified themes relating to 'people, place, and values' and 'forms of community engagement' that would need to be considered in real life local energy planning.[32] These themes are further discussed in the next section.

Full details of the trials and the findings can be found in the accompanying FEL case studies report, which draws on full transcripts of the workshops in each community. By the means of empirical evidence, the case studies report illustrates how the FEL methodology provides increased understanding of the barriers to local energy planning, and that more robust policy frameworks on energy could be developed by local authorities and neighbourhood planning groups that adopt this approach.

28   http://planningguidance.communities.gov.uk/blog/guidance/renewable-and-low-carbon-energy/developing-a-strategy-for-renewable-and-low-carbon-energy/

29   Now subsumed into BEIS - the Department of Business, Energy and Industrial Strategy

30   www.gov.uk/government/uploads/system/uploads/attachment_data/file/226175/renewable_and_low_carbon_energy_capacity_methodology_jan2010.pdf

31   An attempt was made to recruit for a workshop in Broadway, Worcestershire but uptake was very low. The reasons are not clear but a high proportion of second-home ownership and the time of year (Christmas/New Year) may have contributed. A decision was made to move to Moreton in Marsh as a result.

32   The emergence of similar themes around energy planning in each of the trial communities (despite significant differences in community cohesion and sense of place) suggests that the methodology is readily and usefully transferrable to other communities for the purposes of robust community energy planning.

Key principles for policy-makers

Further illustrating the relevance of the FEL methodology, table 3 (below) maps the key findings of the FEL trials against high-level principles for those involved in local and national government policy on energy planning. Key findings are listed in thematic categories, followed by a brief explanation of the findings. Associated key principles for policy-makers, listed in the table, are detailed in alphabetical order on the pages following the table.

Table 3. Mapping the trial findings against key principles for local and national government policy-makers

		Trial findings (key conclusions from the trials)	Key principles for developing local planning policy on energy	Key principles for national government supporting the development of local energy policy
1		THEME 1: Procedural and distributional fairness		
A	Procedural and distributive fairness	People show high levels of acceptance for developments that demonstrate procedural and distributive fairness; there is a strong preference for ownership and control structures that sit with local people, and a high level of transparency about how profits from energy generation developments are distributed.	• Focus on ownership, control, benefit [6] • Investing in engagement processes [7]	• Clarity on planning law vs planning practice [3] • Ceding control [2]
B	Helping other communities	There is a willingness to go above and beyond serving immediately local energy demand, but only if that decision is proactively made and offered by the host community, and only where the ancillary benefit remains local. Communities in areas with the theoretical potential to generate more energy than their own immediate demands are able to quickly grasp that some more densely populated areas are not able to do the same, and show willingness to do so on their behalf. However, attempts to impose energy planning across a wider area (such as a local planning authority) that uses rural areas to 'host' renewable energy infrastructure for larger urban conurbations are likely to be met with strong resistance. For such hosting arrangements to be acceptable, key decision-making processes, ownership and benefit criteria must be in place.	• Investing in engagement processes [7] • Ceding control [2] • Bringing stakeholders together [1]	• Direct steer to communities [5] • Resourcing local authorities [10]
C	Energy planning ambition	People will create community-scale energy plans that meet or exceed some key national and international targets, even if not prompted to do so. Critical in their willingness to develop such ambitious plans is the autonomy to develop a consensus as to the locations and forms of development which would be acceptable, a demand for national guidance and unbiased resources with which to educate themselves on the issues, and sufficient time to work towards a shared understanding and consensus as to what would be acceptable in their community.	• Investing in engagement processes [7] • Ceding control [2] • Raise profile of targets for national and international agreements [9]	• Direct steer to communities [5]

Table 3 cont.

	Trial findings (key conclusions from the trials)	Key principles for developing local planning policy on energy	Key principles for national government supporting the development of local energy policy
2	THEME 2: Landscape change in relation to community energy planning		
A	Energy development as opportunity	Local landscape is not considered entirely sacrosanct. Participants can place great emotional and aesthetic value on their landscape and yet not resist the idea of large scale renewable energy in that landscape, but see it as an opportunity. However, there are limits to the total amount of landscape change that will be accepted, and change has to come about as the result of a fair and open process with fair distribution of benefits.	• Focus on ownership, control, benefit [6]	• Clarity on planning law vs planning practice [3]
B	Accepting the need for change	People accept that change is both needed and inevitable. There is concern about future energy security and costs, as well as an acceptance that climate change is a problem. People recognise that these concerns will drive change, and express a desire to control the process of local energy planning, rather than have a plan imposed.	• Raise profile of targets for national and international agreements [9]	• Raise profile of targets for national and international agreements [9]
C	Belonging and controlling	People's sense of the extent of their local agency over energy decision-making is influenced by their perceptions of wider identifications with 'their' landscape, beyond the local; participants living in a widely valued landscape (in this case a Cotswolds village popular with national and international tourists) doubted their ability to undertake ambitious renewable energy projects because of outside resistance despite local support and enthusiasm. This may influence the degree to which such a community will initiate projects in the first place, and the role of the local planning authority as mediator and facilitator.	• Bringing stakeholders together [1]	• Bringing stakeholders together [1]
D	Cost of energy considerations	Socio-economic status affects acceptability of energy infrastructure in the local landscape; people from low income households are more accepting of energy infrastructure in the landscape if they see a direct link to reduced energy bills.	• Focus on ownership, control, benefit [6]	
3	THEME 3: Community energy planning as a social norming process		
A	Peer to peer learning	People will draw other community members into detailed conversations about energy and landscape if given a framework within which to do so. Participants in the Future Energy Landscapes process were willing to initiate conversation and open debate about energy with a wide network of friends, community peers and colleagues, without necessarily promoting one particular solution. The FEL community energy plans generated were multifaceted and this gave participants a range of options and positions to discuss with others. The process itself gives 'permission' to engage others in discussions about energy, community and landscape, thus acting as a social norming process in and of itself.	• Investing in engagement processes [7]	• Resourcing local authorities [10] • Raise profile of targets of national and international agreements [9]

Table 3 cont.

	Trial findings (key conclusions from the trials)	Key principles for developing local planning policy on energy	Key principles for national government supporting the development of local energy policy
B	Increasing energy literacy	A relatively small time investment per community can result in huge increases in energy literacy to aid local energy planning processes and increase understanding of the need to move to low carbon energy sources: The Future Energy Landscapes deliberative workshop format allows for community members with reasonably low levels of 'energy literacy' to take on and apply complex technical information about energy choices to their local environment in a relatively short space of time.	• Investing in engagement processes [7] • Bringing stakeholders together [1]	• Resourcing local authorities [10]
4	THEME 4: Importance of supporting energy planning at the very local level		
A	Better messaging from central government	There is a desire for more guidance and support from central government about what needs to be achieved at the very local (parish) level. National and international targets on renewable energy and/or carbon saving are not rejected by local communities, and so long as a process for implementing them locally is adequately incentivised and resourced, communities will engage positively. People express an interest in and positivity about the potential to use existing planning tools (such as Neighbourhood Plans, Neighbourhood Development Orders and Allocated Sites) to drive community energy planning in their area, but recognise that Parish and Town Councils lack both the knowledge, influence and time to adequately apply these in order to produce a comprehensive energy plan.	• Ceding control [2] • Bringing stakeholders together [1]	• Direct steer to communities [4]
B	Intra-community relationships	Where landowners are viewed as 'apart' from the wider community, people are doubtful that a fair and distributive energy planning process will emerge: all energy infrastructure needs to be hosted and the relationship of key local landowners with the wider community is a key indicator of how confident people are that the wider community will be able to influence, or benefit from, new energy infrastructure development. Inclusive community energy planning processes allow major stakeholders to be involved from an early stage.	• Bringing stakeholders together [1]	• Bringing stakeholders together [1]
C	Difficulty of distributed action	Communities are sceptical about their ability to drive local level behaviour change: participants in Future Energy Landscapes workshops welcome the idea and see the need for energy saving and behaviour change as well as new generation infrastructure, but have little confidence that this could be driven at the very local level without access to support and funding.	• Bringing stakeholders together [1] • Promoting and resourcing retrofit [8]	• Bringing stakeholders together [1] • Promoting and resourcing retrofit [8]

Table 3 cont.

	Trial findings (key conclusions from the trials)		Key principles for developing local planning policy on energy	Key principles for national government supporting the development of local energy policy
5	THEME 5: The relationship between local planning authority and community-scale energy planning			
A	Local means local	Energy targets mandated from the local planning authority or county level are likely to be considered an imposition: communities express a desire to understand what broad outcome they should be aiming for and to deliver a detailed plan at the local level. The Future Energy Landscapes methodology functions at the spatial level where participants cannot avoid discussion of siting, location, impact and wider community interactions, but while all technologies and approaches under discussion are still at the hypothetical stage, rather than when a major energy development has already been proposed. Planning at this level of detail reduces the chance of conflict at a later stage when proposals come forward.	• Ceding control [2]	• Direct steer to communities [5] • Raise profile of targets of national and international agreements [8]
B	Trust and rapport	Trust between the local community and the local planning authority is an important factor. A perceived local record of 'unfair' planning decisions unrelated to energy applications (for instance on local housing applications) strongly influences the degree to which the Local Planning Authority is seen as a helpful force working in that community's interests in energy planning, and strengthens feelings about the need for local ownership and decision-making structures.	• Demonstrating trustworthiness [4]	• Demonstrating trustworthiness [8] • Ceding control [2]
C	Statutory vs 'lived' boundaries	People do not necessarily define 'home' along statutory planning lines; a parish or local planning authority boundary, while useful for planning policy, may not have resonance as an actual community boundary, especially for communities located near to statutory boundaries.	• Bringing stakeholders together [4]	• Direct steer to communities [4]

[1] Bringing stakeholders together

The FEL methodology reveals multiple opportunities for local authorities (or combined authorities, where within the scope of their powers) to play a coordinating role in helping local communities develop robust energy plans. The trials showed that (subject to the procedural and distributive fairness issues) there is a demonstrable willingness produce more renewable energy than a particular community needs where there are other nearby communities who cannot. **With appropriate resourcing (e.g. office space, funding) local authorities can have a vital role to play in helping to facilitate 'inter-parish' relationships and to support and lead other stakeholder engagement processes that help knit a range of local energy plans into a coherent whole for an entire local planning authority, or wider energy strategies relating to combined authorities.** These could include coordinating and liaising with major landowners (where 'aloof' or absent landowners are seen as not part of a local community), or working with other statutory authorities such as national parks and heritage bodies to mediate relations between residents of a particular local community and wider interests. National government also has a role to play here – membership organisations representing major landowners and energy developers need to be brought on board if a new and genuinely local approach to energy planning is more commonly employed, particularly one that is likely to lead to more prescriptive local policies around ownership and control, as previously discussed.

This implication for policy-makers is relevant to trial findings: 1b, 2c, 3b, 4a, 4b, 4c, 5c

[2] Ceding control

One of the clearest messages from the trials is that there is strongly felt resistance to energy generation targets imposed on local areas by a local planning authority or unitary council. Rather than planning at the local planning authority level and attempting to secure buy-in to a high level plan from a patchwork of local communities, **local planning authorities are strongly advised to use the Future Energy Landscapes approach to support communities to develop a patchwork of local energy plans from which local authority-wide policies (and targets) can then be derived.** Though likely to push many local authorities out of their planning policy comfort zone, ceding control of decision-making on energy policy to local communities could lead to far fewer hotly contested

planning applications down the line and (for onshore wind planning at least) is better aligned with current planning guidance[33]. This is evidenced by neighbourhood planning on housing: when communities get a say over how their area is developed they recognise the benefits that appropriate development can bring; some communities planned for housing numbers up to 10% above the number set out by the local planning authority for that area.[34] **At the national level, government must resist wherever possible the temptation to over-rule local energy policies and development control decisions that have been developed through a robust and open process.** This will also aid in building trust and rapport.

This implication for policy-makers is relevant to trial findings: 1a, 1b, 1c, 4a, 5a, 5b

[3] Clarity on planning law vs planning practice

The trials demonstrated the clear desire for procedural and distributive fairness. Much of the discussion around distributive fairness was centred on ownership and benefit distribution structures that have many parallels with community-ownership models more commonly seen in continental Europe, especially Germany and Denmark.[35] **Central government urgently needs to provide clarity on the apparent mismatch between Planning Practice Guidance (which broadly supports the approach of local authorities favouring such community energy structures by providing extra support in planning), and planning law (which clearly dictates that planning decision-making is blind to the nature of the applicant).** As a result, recent court cases suggest that giving material weight to community energy structures in development control decision-making may be unlawful.

This implication for policy-makers is relevant to trial findings: 1a, 2a

[4] Demonstrating trustworthiness

Where local authorities are perceived as having acted against the interests of local communities in previous planning issues (such as major housing developments), there is little confidence that they will act in the interests of the community with regard to energy planning. To successfully support the use of the FEL methodology with communities in their area, **local authorities will need to demonstrate that they can be trusted to take the outcomes of the processes through to local authority-level or devolved region planning in a**

way that represents the spirit of what each community wanted to achieve with their FEL community energy plan. By committing to a strategic local energy planning process that aims to retain more value in the local economy, both community and district/regional needs could be met. Similarly, and probably more importantly, **national government cannot pay lip service to the importance of local policy-making and then overrule decisions that have been made in line with those policies** if it does not want to undermine faith in the process as a whole.

This implication for policy-makers is relevant to trial finding: 5b

[5] Direct steer to communities

The Future Energy Landscapes trials revealed a desire from local communities to have a clearer steer from central government on national and international targets on energy generation and energy saving, so that they can begin to model and incorporate these into their FEL community energy plans. However, existing planning tools that are aimed at the parish or neighbourhood scale currently carry no requirement for consideration of energy or climate change, and nor do many Local Plans developed by local authorities contain any mechanism by which such national targets have been translated into local planning policy. **Only a strong steer from central government that Local Plans which fail to adequately plan for climate change are unlikely to pass examination will create the necessary impetus for neighbourhood plans to consider energy planning in more detail at the grassroots level.** Paragraph 94 of the Planning Practice Guidance[36] specifically requires that local authorities should adopt proactive strategies on climate change, yet very few local plans can genuinely demonstrate this. In addition, the trials have demonstrated that co-operation between communities (and their associated statutory planning bodies) is likely to be a vital component in producing better energy planning. Government needs to provide clarity on the Duty to Cooperate[37], to encourage better community-led energy planning, which is especially important where communities are located near the boundaries of several local authorities.

This implication for policy-makers is relevant to trial findings: 1b, 1c, 4a, 5a, 5c

[6] Focus on ownership, control, benefit

Local authorities should take note of the clear preference for energy developments that offer distributive fairness (and this preference is strongly linked to that of procedural fairness); local communities cannot be expected to 'host' energy infrastructure without seeing benefits accrue locally. Exploring the acceptability of energy developments, the use of the FEL methodology not only allows communities to demonstrate which energy generation and energy saving technologies they would like to see developed in their area, it allows them to define how they would like to see them developed, and by whom. Incorporating these desires into local planning policy frameworks is a good starting point – Cornwall Council's adopted supplementary planning document on renewable energy provides an excellent template for such an approach[38].

This implication for policy-makers is relevant to trial findings: 1a, 2a, 2d

[7] Investing in engagement processes

The development process for local planning authority or regional energy strategies (where they happen at all) is invariably too light-touch and too thinly-resourced to generate a mandate at the parish or village or community level on how a low carbon transition will be achieved. Local authorities don't have the resources in terms of expertise or funding to put enough thought into energy planning. Also, their priorities often lie elsewhere, and local authorities often work more proactively on areas such as housing. This is at the very root of the disjoint between broadly supportive public opinion at the national, and strong resistance at the community level when developments come forward. **Only with increased resourcing of local and neighbourhood planning processes, so that better collaboration between communities can be achieved, will energy plans emerge that are strategic in nature, rather than parochial.** Additionally, a very clear theme emerging from the trials was that participants strongly favoured development that they perceived to have come about through a process of procedural fairness – without investing the time in genuinely community level consultation, local authorities will continue to be unable to determine what it is that their local communities want to see on energy development, and run the risk of seeing resistance to any form of energy infrastructure development that seems to be providing for the needs of one area at the expense of another. Investing in genuinely local energy plan-making creates a transparent roadmap to a low carbon future that local people feel confident was

produced in a fair and open manner. Using the FEL methodology locally, for an estimated investment of around £7k to £10k per community,[39] could help local authorities develop comprehensive energy plans that can serve the needs of the whole local authority areas, while simultaneously increasing energy literacy, buy-in, and commitment from local communities for a transition to a genuinely low carbon future.

This implication for policy-makers is relevant to trial findings: 1a, 1b, 1c, 3a, 3b

[8] Promoting and resourcing retrofit

The Future Energy Landscapes trials revealed little ambition from either community with regard to energy saving schemes, particularly those that involved retrofit of measures across a large number of homes. Support for energy efficiency and behaviour change programmes at the neighbourhood level is another vital element of achieving a low carbon future, and this lack of ambition was in large part down to a feeling that both local and national government had already tried and failed in this sphere. Reframing this as a local opportunity that can be supported by local planning authorities and central government. **Quickly filling the policy vacuum left by the withdrawal of the Green Deal is urgently needed.**

This implication for policy-makers is relevant to trial findings: 4c

[9] Raise profile of targets of national and international agreements and statute on climate change and energy

The trials showed that community members are keen and interested to engage their peers, and that an understanding of national targets would be viewed as a useful means by which to do so, as these are less

contentious than the idea of an energy plan imposed by the local planning authority. Understanding the scale of change needed is also hugely useful to help communities in using the FEL methodology - being able to sense-check their emerging plans against accepted targets gives a sense of progress and even community pride where they can be exceeded locally. **Government should more clearly communicate the scale and urgency of the change that is needed directly to town and parish councils and neighbourhood planning groups.**

This implication for policy-makers is relevant to trial findings: 1c, 2b, 3a, 5a

[10] Resourcing local authorities

At the national level, **central government should support investment in local energy planning engagement processes by providing targeted resources.** The Neighbourhood Planning Funding Model can serve as an example informing processes whereby central government provides resources to community energy groups (e.g. through neighbourhood planning processes). This need not necessarily entail new budget allocations, but could include providing a strong steer to existing community planning support programmes to include local energy planning in their work, and use the Future Energy Landscapes methodology to do so. It could also include provision of consultancy and facilitation directly to local authorities where there is limited in-house capacity to run facilitated local processes like this.

This implication for policy-makers is relevant to trial findings: 1b, 3a, 3b, 4c,

---

33   The Written Ministerial Statement on onshore wind of June 2015 requires that LPAs only grant planning permission for onshore wind projects 'where the development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan' and 'following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.' www.bit.ly/1YTwJp5

34   DCLG (October 2016) Factsheet: Neighbourhood planning (clause 1-6)

35   www.bit.ly/2gfThyo

36   www.bit.ly/2foR7M6

37   The duty to cooperate places a legal duty on local planning authorities and county councils in England to engage constructively, actively and on an ongoing basis to maximise the effectiveness of Local Plan preparation in the context of strategic cross boundary matters.

38   www.bit.ly/2gfOzAC

39   Based on estimated time to prepare and deliver this process in the two trial communities.

Conclusion

The FEL methodology has been tested and has shown that strong preferences about ownership, decision-making control and distributive fairness underpin any acceptance of energy generation infrastructure in the landscape. The process of 'grounding in place' (which is a fundamental part of the Future Energy Landscapes methodology) results in energy plans that reflect local people's understanding of what will work in the place they call home. It cannot be shortcut, and it does not work at larger spatial geographies (such as whole local authorities) because people need to relate their energy plan to the realities of the community dynamics and landscapes where they live. This goes against the current direction of travel for government policy-making on communities and energy, which is currently moving towards the district and supra-district scale. Such a move towards larger spatial geographies runs the risk of entrenching existing views that energy planning is 'done to' local communities and that meaningful consent is not an element in the decision-making process.

Using the Future Energy Landscapes methodology as a mechanism for developing energy strategies at the local authority level presents a potential challenge to many local planning authorities, because it extends the time needed for community engagement over standard approaches to local energy planning. Also, it may increase the number of local-level energy plans that need to be developed to inform a local authority-wide strategy. However, the long-term impacts of using this new methodology could be transformative; if government supports and resources genuinely local energy planning, it will offer a way out of the current impasse created when local communities resist externally-imposed targets and proposals.

CSE and CPRE firmly believe that a just and timely transition to a low carbon future can only be achieved by central and local government supporting the development of comprehensive energy planning processes at the neighbourhood and parish scale. Only through genuine community engagement will energy strategies emerge that have the requisite meaningful public consent. The Future Energy Landscapes methodology should become a central part of future energy planning processes, and local authorities should be adequately resourced to support their constituent communities to work together in this way.

Appendix A: Key Principles of Deliberative Polling

The FEL methodology heavily drew on the public opinion polling technique Deliberative Polling, discussed on pages 18 and 19. The five elements below play an important role in Deliberative Polling, and were also crucial influences when designing the FEL methodology.

1. Representative sampling

Participants need to be drawn at random from the community they represent, so a wide range of recruitment methods and networks need to be used. In addition, to ensure participation from more deprived groups, financial incentives may need to be offered to cover costs such as childcare and travel. A Deliberative Polling process begins with a survey of a large number of people, in order to assess the difference in opinion between the full group and the sub-set who attend the retreat. This means that the initial poll can include thousands of individuals. For the Future Energy Landscapes project, the aim was not to establish a 'before and after' comparison, but to investigate the development of a process that would lead to an energy plan that was grounded in place and with which participants felt comfortable. However, attempts were made to secure a representative group of participants, with recruitment being carried out through a range of local groups, social media, local press and radio and schools networks. Participants were also offered £100 for attendance at both workshops.

2. Piloting

Many full Deliberative Polling workshops are preceded by a pilot workshop which helps define some of the issues that might be raised. For the Future Energy Landscapes project, this step was not included, for three reasons. Firstly, budgetary constraints dictated that multiple workshops would not be deliverable. Secondly, it was felt that a replicable methodology that could be reasonably deployed by the average parish council (or similar) would struggle to maintain interest over too many workshops, and thirdly because the issues likely to be raised were reasonably easy to predict since both CSE and CPRE have a long history of involvement in public consultations on the energy system. Piloting is also a means of obtaining opinion data before the full engagement process begins, to compare with the post-hoc opinion data collected, which was not necessary for the Future Energy Landscapes project as the aim was not to establish a 'before and after' comparison.

3. Innovative engagement practices

The 'two-wave' approach to Deliberative Polling has been found to be useful in giving participants the necessary time to digest the information and reconsider their views in light of this new knowledge, and a range of facilitated techniques used is required to maintain interest and enthusiasm in the process[40]. The length of the Future Energy Landscapes workshops (one full day plus one evening meeting) meant that a variety of sessions and approaches was needed to keep up interest, with movement from self-led work to group discussion occurring throughout the day. The CESAR tool was adapted and extended for this project to create an interactive and thought-provoking challenge for the participants over 2 – 2.5 hours.

4. Thoroughness and balance of informative materials

Deliberative research methods are designed to address a dual challenge; the topic under debate is highly complex and the public cannot have enough detailed knowledge at the point of original polling to come to an informed opinion. The provision of informative materials was addressed in two distinct ways in the Future Energy Landscapes workshops. Although quantitative research was carried out before the workshops to establish key metrics that could be used to inform discussion about the community and populate the datasets needed for the CESAR tool[41], the full picture of the community, its social structures and its landscape were co-created during the first half of the workshop

process; participants were effectively called upon to pool their knowledge of the history, social structures, landscapes and services specific to their own community. This creates a shared (though not necessarily uncontested) understanding between the participants about the nature of their community and the values they place on things like landscape and community structures. Once this shared understanding has been established, the participants go on to look at energy issues. At this point information needs to be provided for them to put energy generation and energy saving technologies in context with each other, and the CESAR tool was designed such that the key features of each technology or solution can be introduced at the outset, and opportunity is given throughout the implementing of the tool for further clarification. In developing the resources for others to replicate the approach, videos and FAQ prompt sheets have been prepared to help less knowledgeable facilitators.

The principles of Deliberative Polling require that the information provided is both broad and balanced, and so it is important to note key decisions that were made here that could be perceived as breaking this golden rule. The premise of the project was around transitions to a low carbon future, rather than energy transitions in general, and the workshops were conducted within the shared understanding that human-made climate change is an accepted scientific principle (climate change conspiracy theories were not discussed), a major part of the solution to which is a transition away from fossil fuels and a commitment to reducing energy use overall. Therefore the energy generating technologies discussed were renewable energy only. Providing information on fossil fuelled energy generation infrastructure was not considered appropriate in the context of a low carbon future, and neither was nuclear power an option considered in the tool, given that (while demonstrably lower carbon than fossil fuel equivalents) the oft-used description of nuclear as 'low carbon' is highly contested when taken over the full life-cycle.

Notwithstanding the contested nature of nuclear's low carbon credentials or the potential arguments that could be made for new fossil fuel generation capacity combined with CCS, these technologies were considered doubly unsuitable for inclusion in the CESAR tool because the scale at which they need to be developed (usually in the hundreds, if not thousands, of megawatts) means that genuinely local decision-making would be unlikely to play a significant part. Most would be considered under the regime for nationally significant infrastructure projects[42] (rather than determined by the local planning authority), and thus the sense of local decision-making that the workshops aimed to engender would have been lost.

5. Effective facilitation

As with any participatory process, expert facilitation skills are vital to ensure that particular individuals do not dominate discussions, and that lengthy distractions over contentious issues do not derail the wider process. The Future Energy Landscapes workshops were delivered by trained facilitators who are experienced in ensuring participation from all members and in drawing together consensus positions from disparate views. The resources have been produced to allow others to replicate the workshop process as closely as possible whether they have this experience or not, but it is strongly recommended that such a lengthy and detailed participatory engagement process is led by an individual with facilitation experience. Detailed energy knowledge, while an advantage, is not an absolute necessity since the resources have been designed to provide this.

---

40   The Royal Society of Edinburgh, 2005; Lushkin et al, 2008; TNS BMRB and Sciencewise, 2014

41   The workshops are underpinned by some readily available data, principally taken or calculated from the Neighbourhood Statistics website - household numbers, current energy demand, population breakdown etc.

42   Pursuant to the Planning Act 2008, the Planning Inspectorate examines and reports on applications, with the final decision taken by a minister.

Appendix B: CESAR spreadsheet

Below is an example of the CESAR spreadsheet in action. Participants can choose options from power generation [1], heat generation [2] and energy saving [3]. The tool automatically calculates the proportion of the community's electricity demand that the chosen option will meet [4] and the proportion of heat demand [5] along with the approximate development cost of such a project [6], the combined cost of all their selections [7] and number of homes whose demand will be met [8].

Appendix C: Literature review on public attitudes to renewable energy

The following articles are recommended

- Bell D, Gray T, Haggett C, Swaffield J. Re-visiting the "social gap": public opinion and relations of power in the local politics of wind energy. Environ Politics. 2013; 22(1):115–35.

- Bell D, Gray T, Haggett C. The "social gap" in wind farm siting decisions: explanations and policy responses. Environ Politics. 2005; 14(4):460–77.

- Bidwell D. The role of values in public beliefs and attitudes towards commercial wind energy. Energy Policy. 2013; 58:189–99.

- Burningham K, Barnett J, Walker G. An array of deficits: Unpacking NIMBY discourses in wind energy developers' conceptualizations of their local opponents. Soc Nat Resour. 2015; 28(3):246–60.

- Devine-Wright P. Public engagement with large-scale renewable energy technologies: breaking the cycle of NIMBYism. Wiley Interdiscip Rev Clim Chang. 2011; 2(1):19–26.

- Devine-Wright P. Rethinking NIMBYism: The role of place attachment and place identity in explaining place-protective action. J Community Appl Soc Psychol. 2009; 19(6):426–41.

- Haggett C. Understanding public responses to offshore wind power. Energy Policy. 2011; 39(2):503–10.

- Pasqualetti MJ. The misdirected opposition to wind power. In: Szarka J, Cowell R, Ellis G, Strachan PA, Warren C, editors. Learning from Wind Power. Basingstoke: Palgrave Macmillan; 2012. 133–52.

- Toke D, Breukers S, Wolsink M. Wind power deployment outcomes: How can we account for the differences? Renew Sustain Energy Rev. 2008; 12(4):1129–47.

- Walker G, Cass N. Carbon reduction, "the public" and renewable energy: engaging with socio-technical configurations. Area. 2007; 39(4):458–69.

- Wolsink M. Wind power implementation. The nature of public attitudes: equity and fairness instead of 'backyard motives'. Renew Sustain Energy Rev. 2007; 11:1188–207.