Future Energy Landscapes: A new approach to local energy planning

Case Studies report

"For me, it's all about how you engage with local communities. You don't talk about environmental impact, you talk about how this could affect [the community's] daily lives, their landscapes, how they produce energy, how they use energy. A lot of my colleagues found this a fascinating exercise and the first thing they said was, "Why don't you do this everywhere?"

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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.

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Contents

Introduction

This report is one of three components of the Future Energy Landscapes (FEL) materials that evolved out of the FEL project (see box below). It details how the FEL 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 other two components are:

- The primary report, 'Future Energy Landscapes: Design and Rationale', which gives the background and rationale for the development and testing of the FEL community engagement methodology, and the implications for policy-makers working on energy planning revealed by this project.

- The resource pack 'Future Energy Landscapes: Practitioners' Workshop Resources' that provides detailed instructions for practitioners who wish to replicate the community engagement process elsewhere.

All the resources can be downloaded fron **www.cse.org.uk/fel**

What is the Future Energy Landscapes project?

The Future Energy Landscapes (FEL) project is an attempt to develop, trial and refine a methodology that can produce an outline energy plan 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 FEL 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.

Selection and recruitment processes

The FEL methodology was trialled in two communities. This trial process had two aims:

- To understand what sort of energy plan a group of residents would develop when supported with this new methodology, and draw conclusions from any common themes emerging from the plans or wider discussion.

- To test and refine the workshop design before development of the resources for replication elsewhere, and determine whether the methodology is a useful tool for local energy planning.

How were communities selected?

Because a particular focus of the trials was on understanding how people interpret, value and understand their local *landscape*, rural communities were selected, specifically those with an un-interrupted ring of undeveloped land around them (a 'mini green-belt'). With landscape as a key focus, it was also considered desirable that one of the trial communities be located in an area with a landscape protection designation such as a National Park or Area of Outstanding Natural Beauty (AONB), to see if this revealed any distinctions between attitudes to protected and non-protected landscapes. For consistency between the two trials, communities of similar size, population, age and socio-economic profile were chosen, and short-listing also favoured communities where there was no recent history of contention over energy developments nearby, in order that the workshops would not be 'derailed' by participants focusing too much on a single, high profile development they were already familiar with.

A long-list of communities was drawn up, and once the above characteristics had been applied, workshops were held in the following two places[1]:

1) Congresbury, North Somerset: Population 3,500, two recently constructed solar farms on the outskirts of the settlement, no protected landscape designations. Within easy driving distance of Bristol, and thus popular with commuters. Surrounded by agricultural land typical of the Somerset levels, but not in a protected landscape.

2) Moreton in Marsh, Gloucestershire. Population 3,500 at 2011 census (but with more than 700 new homes constructed since then). Straddles the boundary of the Cotswold AONB, Conservation Area, solar farm approximately 4 miles SW of the town but no immediately proximate energy generation infrastructure. Gateway town to the Cotswolds, having the only mainline station to London, thus drawing significant numbers of national and international tourists.

Fuller profiles of each community can be found in Appendices A and B.

The names of participants have been changed. Quotations from Congresbury participants are in green, while those from Moreton in Marsh are in blue.

Moreton in Marsh, Gloucestershire

Congresbury, North Somerset

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1 An attempt had been made to recruit for a workshop in Broadway, Worcestershire, but this was abandoned due to low take-up numbers after several recruitment attempts. Failure to recruit in Broadway may have been down to the season (December/early Jan) and also the high number of second homes in the area.

How were participants recruited?

Recruitment was carried out by contacting local newspapers, newsletters, community groups and networks, tenants and residents groups, churches and Parish Councils. Flyers were also delivered to around 100 houses in each settlement, as well as being displayed by local shops, cafes and pubs. Information was also posted by the administrator of local community Facebook pages. This resulted in recruitment of 11 participants in Congresbury (with no drop-outs) and 9 in Moreton in Marsh (originally 11 but one withdrew due to ill health and another due to work commitments).

The project team felt it was important that the trial workshops were not bounded from the outset by the attendance of participants with a strong understanding of local, national or international policy on energy and climate change targets. A principal aim of the workshop was to understand whether a group of interested *lay people* would collaboratively produce a high-level plan for energy infrastructure and energy saving initiatives locally that was acceptable to them in terms of landscape and wider community impacts. However, a secondary aim was to determine whether, in the absence of any detailed knowledge of existing policy drivers and targets, the energy plans that emerged from the trials would be in line with (or even exceed) national or international targets. With this in mind, a deliberate decision was taken to exclude participants who had detailed knowledge of these topics (e.g. through working in the local planning policy team or as a civil servant with an energy brief). In the event, nobody with this sort of specific background registered to participate in either trial community (brief questions were asked of applicants to determine if this was an area of expertise), so exclusions were not required. In terms of workshop capacity, the project team aimed for groups of 8-12 people for the trials. However, the workshops could work with up to 30 people if there were several facilitators and some sessions were adapted for group work and reconvening, though this would add time.

Note that recruitment literature framed the workshops as part of a research project and a financial incentive was paid for attendance (£100 for attending both workshops)[2]. In a standard community planning process (e.g. as part of a wider Neighbourhood Planning process), incentives may be inappropriate, though may still be worth considering to (a) ensure participation from a broad cross section of the community, and (b) to minimise the attrition rate between the two workshops.

Timing, venues and recording for the workshops

In each community, the Phase A (full day) workshop was conducted on either a Saturday or Sunday[3]. Participants were then given a 10-day break in which to carry out Phase B ('the homework'). The Phase C (2 hour) workshop was then conducted on a weekday evening following this break.

The workshops were held at small community venues that were central to the communities in question – in Congresbury, they were carried out in the Old School House, a central venue used widely for meetings, private functions, fitness classes, toddler groups and so on. In Moreton in Marsh, the meetings were held at the Women's Institute Hall, which is central to the town and regularly used for private functions, as well as being open to the public as a café venue every Tuesday (market day). The choice of venue was determined so that participants would be at ease in a location they were familiar and comfortable with. It was also important that the venues were not owned or managed by the Local Authority in either community, since that could have given the impression of this being part of an existing statutory planning process.

The workshops were recorded and transcribed in order to have a complete record of the discussions for further research and analysis purposes, and further analysis will be published in due course. Full recording and transcription is unlikely to be necessary (or indeed, cost effective) if running similar workshops as part of standard community engagement processes such as Neighbourhood Development Plan or Core Strategy preparation, where recording key points via flipcharts is likely to be a more suitable technique.

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2 Participants were made aware that the incentive was payable only on attendance at both workshops, and would be paid at the end of the 2nd workshop. This is standard social science research practice when using incentives for attendance at multiple events.

3 Workshops happened in late Jan/early Feb 2016 in Congresbury, and in late April/early May 2016 in Moreton in Marsh

Phase A workshops: Facilitated exploration of people, place and energy

The Phase A workshop is designed to give the participants time to come to a shared understanding of their community, the services, places and landscape features that are important to them, and think about which people and organisations locally are able to drive or block change. The workshops in the two communities each lasted a full day. The workshop outline is presented below, followed by discussion of both workshops' outcomes, grouped in thematic areas. The workshop is broadly split by the two main 'Parts' of the day ('Grounding in Place' and 'Energy: Past, Present and Future). The 'Grounding in place' element is a central part of the FEL methodology, through which significant time is devoted to allowing participants to share and understand each others' views on what makes the community what it is, and what is important to them and others about it. This means that participants are very aware of the real people and places that might be impacted by future energy developments, before they begin the last session of the day, which is when the FEL energy plan is created (using a bespoke tool developed for this project). The 'Grounding in Place' element is also vital for the facilitator, as it helps them to understand the community better, which gives them useful insight when running the session where the energy plan is created.

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 2	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.*

Phase A, Part 1: Grounding in place

Context and Introductions

During the 'Context and introductions' sessions, it became clear that the Congresbury group were united in their sense of pride in the community, and all participants thought it a good place to live. People tended to have lived there a long time, having either grown up locally and not moved away, or having moved there to raise families of their own. People liked the range of shops and services and felt that there were good pubs and social opportunities. The only major downside were a few traffic black-spots, principally caused by HGV drivers using the village as a cut-through to Bristol.

> **"** I think what is unique about the village is that it's very difficult to describe, it is just a very nice place to be . [Ralph]

> **"** Probably, most people from Bristol would just fly through Congresbury and not really take much notice of the village. But if they pulled up and took a walk round, I think they would be attracted, just from the vibe of the village. [Mark]

> **"** The beauty of the village is that the circles overlap and the people overlap between them. So you always feel that you can go to an event which you're not part of the circle of, but you will meet people that you know...And will get to know other people as a result of it. [Roland]

By contrast, the Moreton in Marsh group were more split on this issue, with some participants saying that they would not describe themselves as 'proud' to be from Moreton in Marsh, and some expressing a desire or expectation to move away from the area. Facilitated discussion around the diverse views in Moreton in Marsh revealed concerns around whether the local and district government bodies genuinely represented the needs of the local community (particularly in relation to recent large numbers of new homes having been granted planning permission), the feeling that key community events had 'fizzled out' over the years, and that public transport and the range of available retail outlets and social activities were poor. Pride in the community, where it was expressed (along with a concomitant feeling that there were adequate social and community activities) was felt more by participants in higher income brackets and the over-60 age group, who tended to feel that the town offered all they needed and was more of a 'real' town than nearby tourist destinations such as Stow on the Wold and Chipping Campden.

> " It's a postcard town; it's a picture postcard town nowadays. But it used to be a market community town. [Michael]

> " The most significant thing about Moreton, that's it's not a Stow, a Bourton or a Chipping Campden, it is a real place ... that's why we miss the Post Office and the police because these were a part of a real community and not a postcard town.... There are real jobs in Moreton though, they're not all tourist jobs. [Tristan]

> " If there are [places to meet young adults] I don't know where they are ... [Harriet]

> " There's nothing for [my son] to do, like go out with his friends to go to the cinema or go somewhere ... [Lucy]

Places and services

In a similar vein to the positive view of the community in general, Congresbury was felt to have a good range of local services that were aimed at residents – a range of retail outlets and the useful 'Precinct', which contained key shops such as an independent butcher and baker. By contrast, participants in Moreton in Marsh felt that the shops available in the High Street were primarily there to serve visitors and tourists and that the only sizeable supermarket was expensive. For low income families in particular, the lack of affordable shopping outlets and limited public transport options to other shopping destinations made it an expensive place to live. There was a general sense that the Congresbury residents felt that the town's facilities were there to serve the residents, whereas in Moreton in Marsh, people felt that the needs of visitors were what drove the available services.

Congresbury sits within 13 miles of Bristol and easily is accessible by car or one direct bus. By contrast, Moreton in Marsh is roughly equidistant from Cheltenham, Cirencester and Stratford upon Avon (20-24 miles), but public transport links are not straightforward. Oxford is 30 miles away on a direct train.

> " The Precinct, as well, I think is a focal point for the village ... I love it. I love the shops there, the butcher, the baker, the post office. [Maria]

> " Yes, my wife goes down to the Precinct, and it takes her about an hour to get there, 'cause she meets everybody, and chats and gossips ... [Paul]

> " You can only buy [clothes] either online or catalogues or go to Cirencester or Broadway [Tristan]
>
> No, nothing for men at all. [Freddie]
>
> No, and not for children. [Sarah]

> " Ciren's pretty impossible, it's two buses [Freddie]
>
> Two buses is an impossible journey because by the time you get there you'd have to come back [Sarah]

> " [Introducing Freddie) He likes the quietness, he doesn't like the lack of facilities. He would like to see more shops which weren't, he says, antique shops or charity shops...More real shops, and he would like a bigger supermarket. Does he feel a sense of pride? No not really, not particularly. [Tristan]

Landscape and land management

In terms of the built environment, the Moreton in Marsh group were universally agreed that it was an attractive town, the broad High Street being a very photogenic town centre and recognising that the tourist market was driven in large part by people wanting to come and see the 'pretty cottages'. The Congresbury group had less to say on the aesthetics of the town itself – the Precinct (though valued for its services and as a place to meet people) was variously described as 'shabby' and 'outdated'. During a discussion on the difficulties of sensitively upgrading older homes to make them more energy efficient without undermining their heritage features, Congresbury residents were broadly unconcerned, with a general feeling that there were not enough pre-war properties in the village for this to be an issue (and only passing reference was made to the Conservation Area in the older part of the village).

Despite the fact that Congresbury's built environment did not evoke strong reactions in the participants, it was clear that the landscape around the village (rural and open, but not designated as a protected landscape area) was highly valued by the group and gave them a strong feeling of being connected to the land as a used landscape. Some lifetime residents pointed to its formative role in their childhoods (and those of their own children), and all discussed the freedom it offered to them and their children to roam without too much reference to the designated rights of way. There was also regular reference to its agricultural past and a broadly shared understanding of how it came to look as it does (through managed drainage typical of the Somerset levels) and the effort that had gone into reclaiming it. Several participants articulated how this gave them a link to residents of the past. Closer to the town centre, most participants recalled the creation of the Millenium Green, with two of the younger participants recalling the tree-planting they did as school children during its formation. The river and the weir were considered highly prized local assets, again allowing for freedoms such as wild swimming that participants recognised were not afforded to people in many other communities. This feeling of being able to roam free and use the river for leisure activity led to discussion about whether new energy infrastructure would curtail access, and how important it would be to ensure this did not happen (as it already seems to have happened in the case of a local privately developed solar farm).

> " I was one of the children, yonks ago when it started, who planted some of those trees that are now getting pretty big [on the Millenium Green]. Which is pretty good, when you, when you remember being, like, a child planting those trees, and then to be able to come back and see it now, it grown, nice and strong. [Mark]

> " The trees and hedges, we used to love making tree houses, hiding in hedges when we were kids, jumping out on each other. And the water - no matter where you walk in Congresbury, you're pretty much gonna find water - when I was a kid, that was great. Always used to love exploring, and the freedom you feel from just getting out of Congresbury [Ruben]

Given its international renown, it came as something of a surprise that the Cotswold landscape around Moreton in Marsh, while variously described by participants as 'beautiful', 'pretty' and 'very attractive', did not attract such fulsome praise as a *used* landscape in this regard. In rather stark contrast to the Congresbury group's high regard for and strong attachment to the landscape, the area around Moreton in Marsh was variously described as 'manicured' and 'controlled' by several people. While it was clear that participants valued the rather isolated position of the town (well away from the nearest major urban settlement) and the freshness of the air and open feeling this brought to the wider landscape, the group did not demonstrate such a close connection with the landscape as the participants in Congresbury.

This more ambivalent view towards the countryside seemed to be rooted to a large extent in feelings of exclusion and a sense that the landscape was not theirs to make decisions about. While this was clearly felt more strongly by some members of the group than others (in that some had direct experience of being removed from land that was not a public right of way), there was general agreement within the group that private land was jealously guarded and that locals were not welcome on it. There was some disparaging commentary on the fact that large tracts of land, almost ringing the town, were in the ownership of only one or two landowners. This contrasted starkly with comments from Congresbury, where multiple local farming families were named, there seemed good knowledge of who owned the land, and even the language used was subtly different – 'farmers' rather than 'landowners' seemed the more common terminology. Congresbury residents clearly felt quite free to roam.

In Moreton in Marsh, by contrast, several participants expressed the view that they were unwelcome on the land, that it was managed principally for tourists, and that wealthy landowners sometimes employed rather heavy-handed tactics to ensure that people stuck rigidly to a limited range of defined rights of way. In terms of developing any energy projects in the respective localities, it was clear that more determined facilitation would be needed to bring together the key stakeholders in the Cotswold town than in the Somerset village.

" We can just go out and walk, and just walk for miles and miles in the fields, and see lots of stuff without seeing [other people] ... there's open, accessible fields as well, we can go anywhere, really. You've got to be careful of, you know, shutting gates and, you know, animals and stuff but you can go pretty much anywhere, I don't think you're restricted to where you can go - so I think that's really good. [Dominic]

" [I value] the ability to walk and cycle, and things like the Strawberry Line and the river. And, indeed, just generally speaking [being able to go] all over the fields as people were saying earlier. I just like the open spaces... just the fact that there's open spaces, green fields surrounding Congresbury. [Ralph]

" I think the Kings Wood's a fantastic wild, forest place ... I feel very privileged to be able to have access to that, and dormice and deer, and orchids, and all sorts of come up there. [Rufus]

" You're not allowed in some places like the fields and all that, are you? I go for a walk with the dogs, but some places you're not allowed to go, you've got to turn back, you know? [Joseph]

" We pay into the system and yet it's still treated as a sort of private reserve for pheasant shoots or horse events or whatever and most people are not allowed on it. As you say, it's not just that you're turned back, you will be escorted with some force if you got off the beaten track. [Anna]

" You soon find yourself trespassing by accident and people come out and tell you. [Michael]

" Throughout the Cotswolds I have walked well into Oxfordshire on the footpath network and you get exactly the same - private land signs, keep off signs, padlocked gates, obstructions, things dumped, bales or big lumps of rock, dumped across things to stop you parking by a gateway, you get that everywhere all through the Cotswolds. [Anna]

Both communities had large 'woodland' areas adjacent, easily within walking distance. In the case of the King's Wood in Congresbury, most participants felt it was an asset. If they didn't use it, this was down to a fear of getting lost rather than being excluded. By contrast, Moreton in Marsh's Batsford Arboretum was used by only one of the nine participants, with several expressing the view that (as with the services on the High Street) it was for visitors, rather than locals.

" We don't 'tourist it' because we're from here, you know, that's the thing. It brings tourists into the town so that's a good thing, brings money into the town. [Michael]

" I forget [the arboretum] is there really, apart from the fact that we go to dump the Christmas Tree there once a year, that's about it. [Freddie]

" I don't go to the Arboretum because I live here... I've never been because it's local and you don't do that, you know, you just don't. [Sarah]

Both communities thought the landscape in their local area was valuable, and while the discussions around landscape and access were some of the most divergent and informative of the project, they did not seem to lead to hugely divergent choices being made when developing their FEL community energy plans later on (except in the major issue of who would be affected and who should be consulted). Neither group felt their landscape to be genuinely wild or unmanaged; the general consensus in both areas was that centuries of land management for agriculture had created the landscape of today, and in Congresbury there was a definite sense that it was still changing, due to economic pressures on farmers. The Moreton in Marsh group seemed to have a less intimate knowledge of farming practices locally, but knew that the landscape was entirely managed, that it was in the ownership of a limited number of people, and that those families had owned it for many generations.

The quotes below illustrate some of the repeated references to land management practices from the Congresbury group, but similar discussion did not emerge in Moreton, even when participants were directly asked if they understood why the landscape looks as it does. These differences in understanding in depth what drives landscape character may have implications for how much people are able to feel ownership or control of change in their local area. This suggests a need for facilitated energy planning processes that actively seek to bring in those involved as land-managers, as well as those who experience the landscape in a more passive sense.

> The Levels themselves were very carefully managed in order to raise sheep ... the rhynes[4] had to be kept up together, and so on ... if you actually look at the mechanics and what have you, of how that drainage system was done, it's really quite remarkable actually. [Ralph]

> And the fields now, as you say, are not drained sufficiently to actually sustain the herds, and it's not as economic to keep herds of cows and sheep on that grass on any more ... I talked to one of the old boys in the village, we were up on Cadbury Hill, and he said, "What I don't see now is the animals." He said, "you could look out at that landscape in the summer, it would be full of cows and sheep. It's not there now." [Geoff]

> You really are aware that it is a lot more agricultural as a community, or its heart beat still is agricultural in lots of ways. There's lots of home farms that go ... you know, that string up down the side of the Strawberry Line ... it still feels like a, sort of ... almost like a Thomas Hardy, you know. You could take back 100 years, and you can definitely see how it was, and how it still has that sense of agricultural and land to it, and we all, sort of, tap into that in some way. [Rufus]

> When we first moved in, they used to bring the cows, I think, 20 cows up the lane, past our house every ... well, twice a day for milking, up and down ... that's gone now. There's houses there now, where the milking parlour used to be. [Roland]

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4 Somerset rhynes (also spelled rhines, reans and reens in other parts of England and Wales) are managed drainage ditches used to turn seasonal wetlands into useful year-round pasture.

Sense of place and boundaries

In relation to landscape, a critical point of divergence from an energy planning point of view was the conception of 'where is home?' In Congresbury, with the exception of one participant, all responses to the question of community boundaries were quite closely drawn around the village itself, and often linked to views of the village when driving in from one of the main approach roads (Rhodyate Hill and Cadbury Hill being key viewpoints), most of which were within a half-mile or so of the village centre. The church spire was noted as the main homecoming beacon, as a result of its height compared with all other local structures. (The single divergent view was from a participant who had grown up in a nearby settlement and considered the landscape anywhere from leaving the M5 [around 5 miles away] to be 'home'.)

By contrast, the Moreton in Marsh group variously described a much wider boundary. Though tightly drawn to the north of the town (where the Gloucestershire and indeed the Cotswolds AONB boundaries are shortly reached), the southern boundary in some cases extended as far as Bath, Oxford, Burford and Chipping Norton[5]. This inability to define a clear boundary for the town, and the fact that it was clearly linked to an overlapping sense of place and home being the wider 'Cotswolds', rather than just the settlement itself, had implications for whom the participants thought may need to be consulted if any new energy infrastructure were to be developed, but conversely, how much they felt 'others' from 'outside' would try to stop any plans they had to develop energy infrastructure. Accepting that the boundaries people draw for themselves may be different to the boundaries that statutory bodies work with is a crucial lesson to learn here: cross boundary co-operation in energy planning, and respecting fluid community boundaries in terms of ownership and benefit structures from energy infrastructure is likely to be a crucial part of developing acceptable energy strategies at the district and combined authority level.

5   As the crow flies, these settlements are some distance from Moreton in Marsh: Bath (51 miles), Oxford (25 miles), Burford, (13 miles) and Chipping Norton (7.5 miles), and all are located in different district, unitary and county authorities.
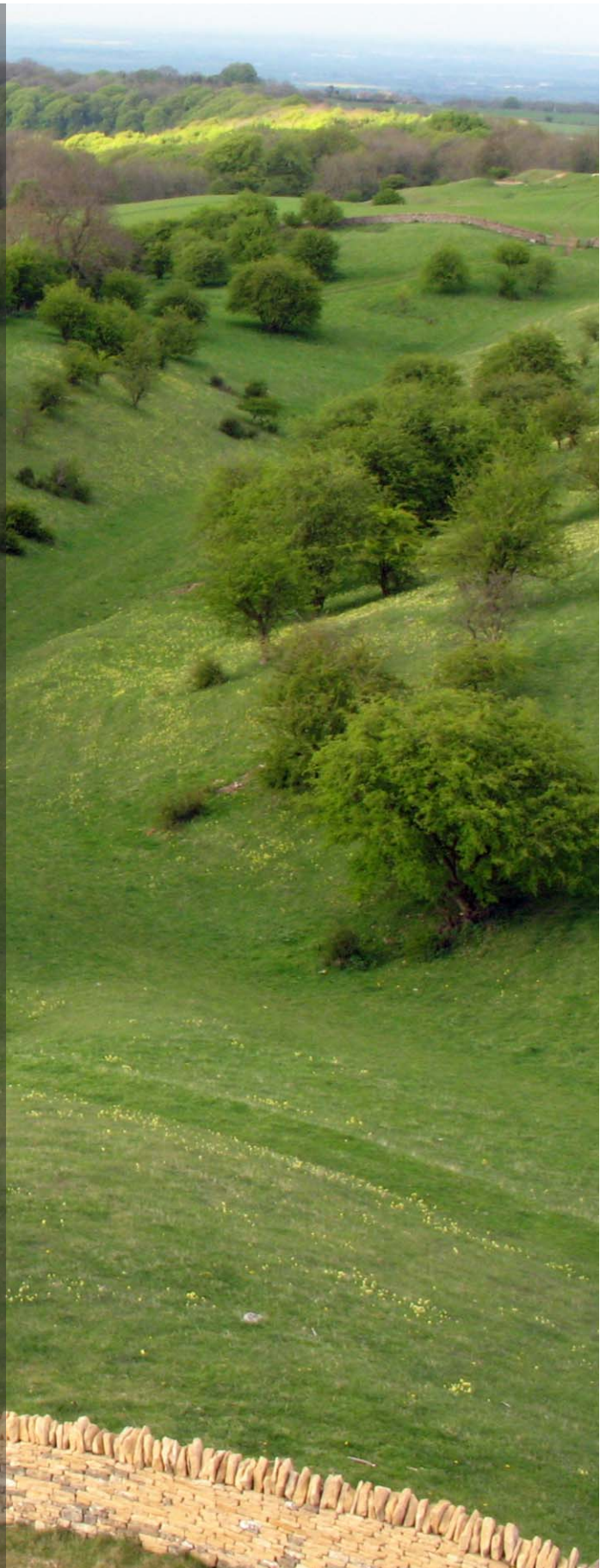
People and organisations: Power, influence and enthusiasm

Power structures and local leadership (whether by statutory bodies or influential local groups and individuals) was another point of considerable divergence between the two communities. Although seen to have limited power to prevent unwelcome development, the Parish Council in Congresbury was viewed in a broadly positive light, and Congresbury participants also discussed other groups and individuals (such as the active Residents' Action Group and a dynamic Wildlife Action Group) who might support or object to major developments in the area, but who would have influence either way. By contrast, participants in Moreton in Marsh struggled to identify any genuinely local groups or institutions that would have a positive impact or drive forward any opportunity.

> " I think the church is very inclusive, right? I don't go to the church, I'm not a christian. But I do think the church is very inclusive of village life and village people. [Maria]

> " It's very difficult to get involvement of the community really effectively.... But I mean, all these little bits and pieces [previously mentioned action groups] are working very well, and they're absolutely brilliant. And as we were saying earlier they, sort of, overlap and spin off. [Ralph]

> " We, we have a village website... we get about a thousand hits a month on it. I suspect in terms of a village of our size, that's quite substantial...It's a village noticeboard, it's, it's got things coming up, various bring and buy sales, and coffee mornings, and that sort of thing. Erm, but it's also got important stuff like the housing developments and planning applications. [Paul]

> " Communication in Moreton is terrible ... advertisement for things is atrocious. [Freddie]

> " I've put that the church is itself very active but not in the community, funnily enough. It's very active, but inside itself, isn't it? What else, oh yes, there is no civic society like there is in Stow, there is no Moreton society, there is no forum in Moreton is there? [Tristan]

Whereas Congresbury Parish Council was broadly thought of in a positive light (despite the fact that many felt it did not have any real power) Moreton in Marsh Town Council was derided by several participants. At best it was viewed as rather reactionary but essentially impotent, and at worst as rather dysfunctional with a very high turnover of councillors.

> " Well [the Town Council] just say no to everything... For every single thing it's funny, oh no, no, no, no, anything it's always no ... They never seem to have a plan. They're very reactionary. [Freddie]

> " Well they're usually resigning, most of them... You never have the same person on. [Tristan]

> " Every other week there's a byelection for another councillor, it's as if they can't be bothered' [Freddie]

> " The only power that they have is over cemeteries, skateboard park verges. [Sarah]

At the level above, Cotswold District Council, there was a strong sense in Moreton in Marsh that the community felt sidelined. Located in the north eastern corner of Cotswold district, the participants used words such as 'peripheral' and 'sacrificial' when discussing how development in their area had occurred. While they felt that Cotswold District Council was influential in driving development locally, it was universally felt that it would not act in the interests of Moreton and was not trusted as a body that would drive energy planning in a way that would benefit Moreton itself, rather than considering the needs merely of the wider district.

> ❝ Well not a lot of [the Section 106 money] has been put into community services and stuff, there has been money set aside by the council but it's one of them where there's been no plan to use it. It makes you wonder if it's just going to be sat there and then [the District Council] will allocate it for something else when we've forgotten about it. [Michael]

> ❝ I think there's been a lot of interesting development and I think... everybody who's lived here a long time might agree is that a lot of families have been moved from Cheltenham and Gloucester, do you agree? [Sarah]
>
> Yeah I do. Troubled families as well, they ship them out here. [Michael]
>
> They're used to having a supermarket, they're used to having somewhere to go, the kids are used to having a framework around them of professionals maybe who support them... and I think you then get certain social problems. [Sarah]

The MP was considered to operate at a geographical scale that meant Moreton was only of similarly peripheral interest to him (though he received praise for championing flood defences). Where Congresbury was at the early stages of developing a Neighbourhood Plan (and this led to repeated references when the CESAR tool was being used about how the outputs of the workshop could be used to produce supportive policy for energy projects), participants from Moreton explained that the town council there had decided that such a plan was not necessary, and therefore did not explore how their workshop outputs would be used by the Town Council.

Additionally, as with much of the discussion about organisations of influence, there was a distinct difference between Congresbury and Moreton in Marsh residents on their views about local landowners, and how embedded they may consider themselves to be in terms of a community approach to energy planning. The perception of key local landowners as being apart from as opposed to being a part of the community was revealing in as much as it affected each group's tendency to include landowners as part of the community planning process, or to treat them as 'other' in the conversation. The Congresbury group drew little distinction between the group members (and by extension the wider community) and the main farming families who owned the land around the village. In contrast, the Moreton in Marsh group clearly saw the local landowning families as apart from the main community, and thus more of a barrier in terms of developing a local energy plan that was acceptable to all.

> ❝ [The landowners are] a bit like an exclusive club though. [Michael]

> ❝ I used to live in Norfolk which is also agricultural and I used to come to Moreton, we're going back into the 70s and Moreton was very feudal, everybody spoke almost ... in the tone of voice you could hear them 'lifting their caps' ... Norfolk was equally agricultural but it didn't ... it felt more peasant-y. I'm sure it wasn't, I'm sure it was exactly the same, but Moreton was quite feudal. Titles do count out here. [Tristan]

> ❝ The local farms, a lot of them have been owned by the same family for generations and, you know, they are part of the village, and very approachable if you ask them: can we open the gates for this that and the other?... And, you know, they love being part of the village, because they have been here for so long. [Maria]

The general feeling that there was nobody acting in the town's interests (or that the Cotswold District Council in particular would use Moreton in Marsh as a place to put unwelcome development) left the participants there struggling to identify any local group or statutory body that would be able to implement their energy plan, with a feeling that nothing much would come of it. One participant did speak at length to a former town councillor during the homework phase and was confident that the town council would perhaps champion a community owned energy generation project if it were presented to them as a realistic business proposal, but this confidence was not

strongly felt by others in the group. This suggests that expecting communities to engage in local energy planning will be difficult if trust is not established first. Community members must trust both the competence and the intentions of their parish council,r neighbourhood forum or local authority if they are to have confidence that their views will be taken seriously, and to feel that those with control of the land will engage for the benefit of the wider community. Those using the FEL methodology will need to be clear with participants about how the resulting FEL energy plans are to be used if they wish to gain this trust.

" In my view, community only actually form in response to an excessive threat, or an opportunity. I think that Moreton is in a situation where there are external threats which are seen as threats, so supermarkets, housing, whatever and that will galvanise people. There aren't any real opportunities. I think it feels, because it's marginalised, because so much of the resource and the power is distant from the residents, I think Moreton is a community that doesn't have any opportunity. It can't see what Moreton might look like in 20 years time, what could we drive forward? There's no unifying spirit of where we could go and I don't know what that could be. It could be energy, maybe Moreton could be England's first carbon neutral market town or something, but it would need a hell of a lot of people to share that vision. [Anna]

Phase A, Part 2: Energy: Past, present and future

Community energy use

The session on personal energy narratives and the facilitated discussion that followed quickly revealed that almost nobody, in either community, had a strong grasp of how much energy an average household uses, and how this broke down between space heating & hot water, and lighting & appliances. Most participants had thought their heating/hot water demand was a much smaller proportion than it really is, and this stimulated discussion about the 'low-profile' of tackling heat waste in public discourse on energy saving, by comparison to the high profile of 'switch it off' campaigns for lighting and so on.

In both communities, the session on historical energy narratives revealed that participants were keenly aware that modern life is more energy intensive than the lives of their parents and grandparents, with examples given of the frequency with which we now bathe and shower, and wash our clothes, and the enormous changes in travel modes and overseas sourcing of goods over the last century. They also felt their grandparents would have had a more direct relationship between supply and use of energy; coal deliveries were expected to have created a day-to-day concern about where heat in particular would come from. In both communities, participants who had experience with either oil heating or prepayment meters expressed immediate concerns about security of supply, but those on mains gas and direct debit felt that they seldom gave security of supply a thought. However, several participants in both groups referred to a general awareness of a looming energy security issue, and general concerns relating to climate change.

Energy and landscape

Participants were next asked to consider how energy currently shapes the landscape in their area – the Congresbury group were very aware of the high voltage power lines on the edge of the village (and marked the map accordingly), knew that they were linked to Hinkley Point, and believed that they may be potentially upgraded or upsized in the near future. They were also very aware of a large distribution substation to the south-east of the village, and even of an LPG gas storage and distribution depot a few miles away. The Moreton in Marsh group at first struggled to think of major energy infrastructure locally, with the exception of small, street level substation boxes. Only one participant was a aware of a small solar farm at the village of Longborough, about 1.5 miles away, and it took some prompting and debate before participants recalled transmission lines passing through agricultural land on the north-west edge of the town, or indeed the distribution substation to which they were connected, again located at the northern end

of the town. The group were shown images of distribution cables and asked if they knew where such lines ran nearby, but despite everyone recognising that similar infrastructure existed locally, they could not pinpoint the location of such power lines on the map. This generated some discussion about how such infrastructure comes to be taken for granted after a while.

## Creating a FEL community energy plan

In the last two hours of the Phase A workshops, both groups produced a FEL community energy plan: a snapshot of renewable energy options that workshop participants, representing a given community, consider suitable for further investigation, and that could possibly be implemented on the ground. The FEL energy plan could be fed into the evidence base for the development of a wider community energy plan (e.g. within a Neighbourhood Plan or the Local Plan developed by the Local Authority). The FEL community energy plans were produced using the CESAR tool. As described in the Design and rationale report, 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, projected onto a wall near where the participants are using the cards, accompanies the CESAR tool. 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 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.[6] When participants select a card, discuss it 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.

Both of the FEL community energy plans created in the trial communities included large renewable energy generation capacity in the local area, along with domestic scale micro-renewables and energy efficiency measures (Table 1 below gives an impression of the components of the communities' FEL energy plans). It is of note that, as the session progressed in each community (and indeed at other times throughout the workshops) there were also repeated references to the need for new houses to have better energy efficiency standards and mandatory generation capacity of their own (and some frustration from both communities that this was not being done, or that previously existing targets such as the zero-carbon homes standard had been abandoned). Both groups included elements in their energy plan that would relate to new housing development (e.g. biomass district heating schemes that they felt would only be economical to build as part of a new housing development, rather than being retrofitted to existing housing).

It is also worth noting that the selections that make up the FEL energy plans shown above do not reveal the full extent of the debate in either community. Some technologies or approaches were initially added to the table, discussed and then subsequently removed if the group felt that they were unrealistic options. For example, the Congresbury group discussed AD at length before concluding it was not logistically workable, both groups discussed district heating in existing buildings and decided that the economics meant it did not warrant further investigation (but, as mentioned above, they did include it for proposed new housing developments). Domestic scale technologies were, in both cases, scaled back from the original number of cards laid down – energy saving, air source heat pumps and behaviour change all started with a higher proportion of community take-up, before being reduced after discussion around who would drive such an initiative forward, and what would induce people to take part.

6   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.
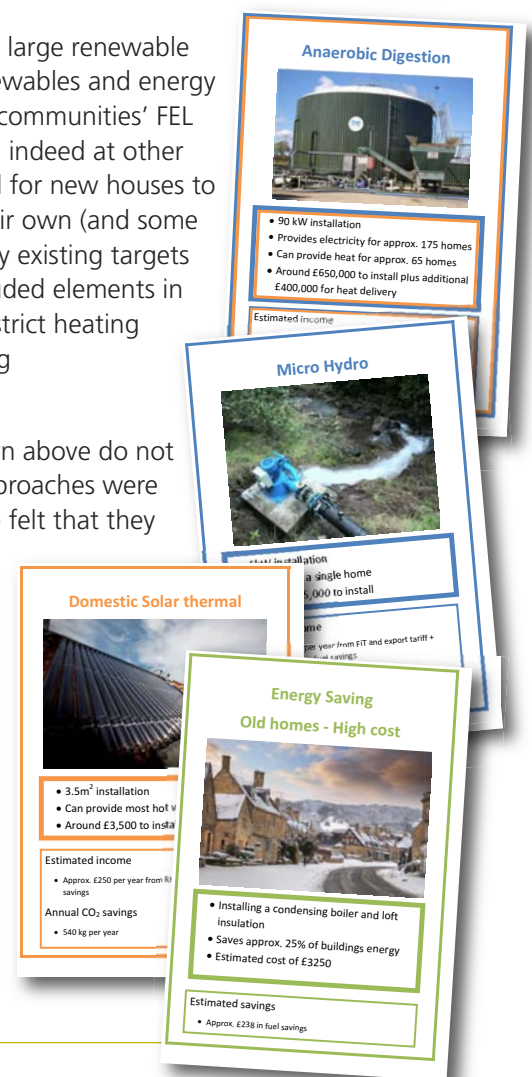
Taking the approximate energy demand of each community, it was possible to estimate roughly the proportion of overall demand that could be met by the planned installations outlined in each FEL energy plan, along with the proportion of energy demand that could be avoided if the proposed energy saving measures were applied (see Table 2).

Table 2 shows that a similar picture emerges: both communities' FEL community energy plans exceeded the target of 20% energy from renewables (in line with the EU Renewables Directive[7]), both were heavily skewed towards electricity supply and both had almost negligible levels of energy saving activity, despite each group discussing these options at some length[8].

Table 1: Summary of the community CESAR tool outputs from the Phase 1 Workshop		
	Congresbury	**Moreton-in-Marsh**
Energy saving	20% of homes engaging in energy saving behaviour change (switching off unwanted appliances and turning thermostat down by 1 degree). 20% of new homes putting in draughtproofing and a lighting upgrade.	25% of homes engaging in energy saving behaviour change (switching off unwanted appliances and turning thermostat down by 1 degree).
Heat	100 domestic air source heat pump installations Biomass district heating for proposed 70 new homes* 5 community buildings (village hall, meeting rooms, church etc) fitted with biomass heating	200 domestic solar water heating systems (solar thermal) Biomass CHP with district heating network for 600 new homes* 400kW Anaerobic Digester
Electricity	1 x 2.5MW wind turbine (approx. 90m tall at hub height). 200 domestic solar PV installations (~4kW) 2 x solar PV farms (already existing, ~ 8Mw and ~ 1.3MW). 1 x 200kW hydro turbine	1 x 2.5MW wind turbine (approx. 90m tall at hub height). 200 domestic solar PV installations (~4kW) 2 x 500kW ground mounted solar PV arrays.

 * Both groups included district heating for new housing, since in each community there was a current planning application for new housing (around 70 homes in Congresbury and up to 600 in Moreton in Marsh).

Table 2: Approximate proportion of each community's current energy demand that could be met by FEL energy plans produced in the Phase A Workshop				
	% of current total energy demand met	% of current electricity demand met	% of current heat demand met	% of current demand offset by energy saving or behaviour change
Congresbury	30%	75%	17%	>1%
Moreton in Marsh	37%	66%	27%	>1%

Table 2 also illustrates clearly the difficulty that all participants had in convincing themselves that a high proportion of local households could be persuaded to alter their energy-use behaviours or invest in energy saving measures for their homes. Both groups demonstrated very little ambition in this area, despite lengthy discussion. However, this was not a direct result of thinking community energy saving campaigns and activities would have no impact; rather, there was a general sense of frustration from both groups that successive governments had been trying to achieve this for a considerable length of time without success, and a feeling that it would be too difficult to attempt at the community level. In addition, there was discussion in both groups about the idea that when energy supply is invisible, then energy saving is less likely to happen.

This lack of ambition on energy saving and behaviour change initiatives is a key learning point from the trials – without a clear steer and resource from central government direct to communities and householders, it is not likely that community groups will choose to drive forward such activity when they see that government itself has apparently failed (e.g. in terms of the poor performance of the Green Deal, and lack of any replacement scheme).

> Perhaps, because delivering change at an individual household level is more difficult, that we'd somehow maybe avoided it or hadn't emphasised it in the way that we could have done because it's changing individual behaviours at the household level that, ultimately, would lead to maybe behaviours by our children and then gradually, multigenerational change and the multiplier attached to that is somehow higher than the grabbing for a big headline wind turbine... we definitely seemed to be going towards the bigger solution because we all agree how difficult and frustrating it is to try and get a community to interact and to buy in and subscribe at the individual level and aggregate that out. It's difficult.[Rufus]

> When, people aren't responsible for making their own power, you're not gonna get any sort of consensus of people saying: we need to save energy, we need to save energy. Because you just don't see it, you know ... you're not interacting with how your energy is produced [Mark]

FEL discussions: differences and similarities

The process of developing the FEL plans was characterised by intense discussions on a range of topics of a varying nature. The divergence in feelings about who would act on behalf of the community (discussed above in 'People and organisations'), and particularly participants' views on strength of attachment to the local countryside, led to quite different discussions about who would want to get involved in planning for local energy developments. In the case of the Congresbury participants, it seemed that they felt that decisions about local energy infrastructure could rightly be taken by local people and that others from 'outside' would have little reason to engage. However, discussions in Moreton in Marsh repeatedly returned to how people from outside the area would react to any proposal to develop renewable energy infrastructure, and seemed to think that this wider community of interest would 'trump' the views of local people – in essence, even if local people determined that they wanted a particular generation project, it would be prevented from going ahead by external influence.

This ranged from concerns that there would be 'howls of anger' from the nearby community of Stow on the Wold (in case development affected tourist trade there) to reflections on the fact that some parts of the UK are considered so beautiful that there may be a global reaction to any proposals. This narrative that the landscape (like the shops and eateries available in Moreton in Marsh) were for outsiders, rather than locals, was returned to several times during the workshop, and was in sharp contrast to the stronger sense of community and 'locals first' provision that the Congresbury group felt.

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7   It should be noted that the Directive relates to all energy consumption at the national level, so would include transport and industry, whereas the Future Energy Landscapes workshop looks at buildings energy use only (both domestic and non-domestic), since this is the sphere over which a community's members can reasonably be expected to exercise some control.

8   These totals included district heating in new housing developments currently going through planning, but where the participants assumed they would be successful, so the additional population associated with the new homes (and their energy demands) were added to the CESAR spreadsheet.

" Do you not think that if we suggested to the good people in Moreton a big turbine there would benefit the community, and we sold them on the idea, that the people in Stow would go absolutely nuts, the people in the whole of the north Cotswolds would say, 'well this is going to ruin our tourist industry'. [Anna]

" ...yeah, if you brought Stow in, we might have to ask the whole Cotswolds... [Lucy]

" I lived in a place called Loch Luichart and the landowner got approval in principle for a wind farm ... and it still hasn't happened because people from all over the world were up in arms about it. [Anna]

Beyond this divergence of views on how empowered each community group felt to both develop and then implement their plans, the remainder of the CESAR sessions contained notably similar discussions in both communities. Six shared outcomes emerging from these discussions are detailed below.

Increases in energy literacy

A first key insight is how using the CESAR tool increased the participants' levels of 'energy literacy', which were revealed as quite low during the sessions on personal and historic energy use. Since the tool includes a spreadsheet that estimates the outputs of the chosen technologies (or the avoided energy use achieved by the installation of the energy saving packages), participants quickly noted the differences between different technologies at different scales (e.g. in terms of energy output vs cost of development, or landscape impact). In both communities this affected what was included in the FEL community energy plan. Firstly, participants avoided small-scale wind entirely and only briefly discussed medium-scale wind; the non-linear relationship between turbine size and power output made both groups tend towards single large turbines rather than groups of smaller turbines when considering wind. Secondly, participants (in Congresbury in particular) who had been generally supportive of ground-mounted solar PV tended to be less supportive once they had seen it compared with other generating technologies such as anaerobic digestion and wind power, in terms of landscape impact for the amount of power generated.

Identifying respective complexity in different types of energy developments

A second key realisation that emerged in both groups was the disjoint between the theoretical ease with which renewable electricity could be generated in quite large quantities as opposed to renewable heat: both communities discussed the development process for something like a large wind turbine or solar farm (in essence 'fit-and-forget' technologies) and recognised the comparative difficulties of the complex engineering and ongoing management requirements of a biomass district heating system, or rolling out a complex retrofit scheme for air-source-heat pumps to multiple homes. This mismatch between a potentially large generating capacity for electricity and the fact that the vast majority of both communities' overall energy demand is currently served by gas or oil to provide heat raised some comments around the potential to electrify heat demand.

Thinking about maintaining or changing the current split between electricity and heat demand

The split between electricity and heat demand at the household level was clearly not well understood by either group at the outset (with members of both groups expressing surprise at the proportion of energy use in an average household that would be provided by gas/oil/LPG as opposed to mains electricity[9]). However, this was grasped very quickly once revealed by the facilitator, leading on to some debate in both communities about whether it would be simpler to electrify current heat demand, or move to alternative heating fuels such as biomass or heat pumps. As previously noted, participants had already identified that renewable heat distribution projects could be costly and disruptive to install within the existing housing stock (e.g. a biomass district heating system), or that it could be complex and costly to arrange retrofit of multiple heat pumps to many homes. Thus there was discussion in both communities about whether large-scale electricity generation (such as AD or wind) would be preferable, with homes being converted to electric heating as an alternative.

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9   Except for homes with electric heating, which were discussed, though none of the participants had this arrangement in their homes.

Determining the appropriate scale for action

Fourthly, particularly evident in the Congresbury workshop was a tendency in the session before the CESAR tool was used to promote household-scale self-reliance, rather than community-scale or centralised energy generation solutions. Once the participants began to engage with the CESAR tool and were able to compare the outputs of, for example, domestic air source heat pumps with district heating, or roof-mounted solar with large scale AD, there was a move away from the household level position.

Accepting renewable energy sources as an appropriate pathway

In neither community did the discussion turn to avoiding renewable energy in favour of fossil fuelled or nuclear options, and there was general support for the idea of renewable energy sources as a suitable development pathway (though in Congresbury at least there was some criticism of past government policy having promoted renewable energy via mechanisms were perceived as bringing profit to developers at the expense of host communities). In both communities there were repeated comments that more sustainable and secure energy sources were needed. Nobody dismissed climate change or challenged the science behind its assumptions. The potential for increased insecurity of supply over the long term was touched upon several times (in relation to current generating capacity reaching the end of its working life). Participants also recognised the difficulties that low income households have in meeting the cost of energy. In both communities, those participants who used oil or pre-payment meters were more keenly aware of potential loss of supply, and how this could become a more common experience if broader energy supplies became less secure.

Distributive fairness as an underlying principle

Finally, in both communities while developing the energy plan, discussion turned quickly to the topics of who would develop such energy infrastructure, who would own it, and how the benefits would be distributed. Ownership and control structures were intrinsically linked to the acceptability of almost all of the proposed energy infrastructure, and this was returned to in the Phase C workshops.

Phase B – Reflection and homework

The Phase B homework period is designed to give the participants time to really reflect upon everything that has been discussed and produced in the Phase A workshop, in particular whether they feel that the FEL community energy plan they have produced is something they still feel happy with as a collection of potential projects for development locally. This period lasts for approximately 10 days, during which they are A) asked (as individuals, not as a group) to think about the FEL community energy plan, the wider discussions about the landscape and community structures they value, and any other themes that emerged from the day (such as community ownership and benefit structures that may have been discussed), and B) to reflect these to their individual friends and family, and ask them for their views. Discussing this homework is a key component of the Phase C workshop which follows.

In both communities, every participant had done their homework. Some had clearly spent more time on this than others, but every participant had spoken to several other people (see Appendix C for detail). The range of people spoken to was encouraging; it was a given that if a participant shared a home with someone else (a partner or housemate), then they had spoken to them, but almost every participant had spoken to other acquaintances and colleagues as well. These conversations (bearing in mind they started the previous workshop with, in many cases, very limited knowledge of low carbon energy options) often demonstrated considerable understanding of the nuances involved in decision-making around energy planning and the level of detailed conversation that needs to be had, in particular the very specific nature of the suitability of proposed locations, the nature of the existing landscape, considerations of ownership structures, and how the benefits would accrue. It was also telling that the conversation in Moreton in Marsh frequently tended towards what other residents thought the views of outsiders would be (whether positive or negative), whereas the Congresbury participants spoke only of the views of other residents directly.

Participants had identified objects (principally photographs) or had done further research that they then used to stimulate debate about the FEL community energy plan during the Phase C workshop, in particular about the relative merits and disadvantages of certain technologies (principally contrasting landscape impact against potential energy output). This led to some mature discussion about the trade-offs that might need to be made to achieve a secure energy supply while encroaching as little as possible on the landscape.

Finally, participants tended to be more aware of energy infrastructure when they returned for the Phase C workshop, with several participants stating that during the homework phase, they consciously recognised nearby energy crops, AD plants and transmission infrastructure that they had passed regularly but not previously noted. Thus the Phase B reflection period seems to have also triggered a heightened awareness of energy use and energy infrastructure generally, rather than just in relation to the conversations that individuals had with friends and family.

> " I talked to my work colleagues...the AD most of them through it was a good idea because we could use food waste and animal waste. They were supportive of wind, but the concern was where to put it, and it would be too tall, and, you know 'but we're in the landscape of Moreton.' [Lucy]

> " ...everyone was, in principle, in favour of renewable energy, nobody said 'it's a waste of time, let's build nuclear', everyone was onto the green energy ... I have a friend who has a 20 acre field and she said all the things everybody else did, and I said 'which one would you like in your field then?' and she said; 'none of them' and I said 'so you're a NIMBY then?' and she said, 'I never thought I was, but when you put it to me, yes I am'. And I think that's the problem with all this stuff, everybody likes the general idea of it but the detail about exactly where is so important. [Anna]

"I've brought a picture of turbines from where I used to live in Cornwall...when they were first built they actually fitted into the landscape because they were near Goonhilly, BT has an earth station there, so when these were first erected I think they fitted into the landscape. The impact was reduced because people had in mind these huge satellite dishes, they're actually stood beside these dishes... Where we got to at the end [of the first workshop], we talked about where to put one....A site that would make sense to me would be the Fire College, because the landscape there, goes more with a wind turbine than elsewhere... it used to be an airfield, it goes with the connection in your head. There must have been, you know, control towers and the like. [Thomas]

"Michael and I...were on the High Street. Michael pointed out the northern end of town [as a site for a wind turbine] and that really would frame, it's a beautiful site, it would frame really well the High Street. [Freddie]

"I conducted two in depth interviews [with two retired couples who live in the same street], in each case I asked for views on the energy saving, solar on homes, a large wind turbine and AD... Somewhat to my surprise, they were not negative about the 300 foot wind turbine, though in both interviews they would have it sited on the ridge between Bourton on the Hill and Fish Hill, and did not see parish boundaries as definitive. All were most enthusiastic about the AD. ... The former councillor felt that the Town Council could lead such a project and thought it would, if approached with a costed business plan. [Tristan]

"When I talked about the wind turbine and said it was the same size as the one at Avonmouth, there was horror and 'are we all high on something?' The thought of putting a wind turbine that size anywhere in the vicinity was not met with any success at all. I suggested putting it down by the sub-station because it's already ugly, but that was pooh-poohed. [Paul]

I'm pretty sure that would change it if it was benefiting the community... [Roland]

"I talked to some of the Committee from Wildlife Action Group – particularly, with a view to the wind turbine because I wanted to see what their reaction was with bats and the turbine and it was OK; if there are no bats around there, there's no objection. I was surprised – opposite to Paul, in a way – I was surprised that I'd met nobody that was fiercely against having a zonking great wind turbine lurking somewhere. [Geoff]

"The reaction was opposite to the people that Paul talked to, it was, "Oh, do we want one of those in the village?" And when I said, "Well, this community [Gamblingay] has got it 1.2 miles away in the middle of nowhere and they went, "Oh, that's interesting". [Geoff]

"Well, I had a similar experience to Paul that I talked to people about a large wind turbine and they were horrified at the idea of it being actually in the village, but they might feel differently if it was quite a way away. [Joanne]

Phase C workshops: reconvening, reflecting, reconsidering

The Phase C workshop is designed to give the participants time to come back together as a group, discuss their individual reflections, and the feedback they have received from the wider peer groups with whom they have spoken. The second workshop is also designed to reflect again on whether participants feel that their FEL community energy plan is something they still feel happy with as a collection of potential projects for development locally. The Phase C workshop lasts for two hours.

The workshop was made up of the sessions listed in the table below. Unlike the longer, first workshop this workshop was not split up in different parts and themes:

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).

In the two communities, although there were lengthy discussions around the feedback that came from friends and relatives during the homework phase, neither FEL community energy plan that had been generated from the CESAR tool was altered as a result of the Phase C workshop. Despite some members of each group meeting resistance to the idea of a wind turbine in particular during their homework phase, neither group ultimately suggested that they would have to remove the large wind turbine from their plan, but would want to discuss it further with the wider community.

While the workshops contained detailed ongoing debate, in particular about the very specific placement of any larger technologies, discussions in general were characterised by a forward-looking approach; participants felt that change is coming, that sustainable energy generation is needed, and that they would prefer to understand what was needed and control what energy development happens proactively at the very local level (rather than reacting to a plan imposed from the district or county). Woven throughout the discussions was the idea that concepts of ownership, control and distributive fairness were very closely linked to the acceptability of any change in their local landscape.

Given the distinctly different flavour of the general discussions about the nature of each of the communities during the non-energy parts of the workshops, both workshop discussions on energy were notable for their striking similarities, grouped in three broad themes:

1 Procedural and distributional fairness in community energy planning

2 Landscape change in relation to community energy planning

3 Community energy planning as a social-norming process in its own right

These three themes are discussed in more detail below. Along with two further themes drawn from wider discussions from other parts of the workshops, they are further considered in the Design and Rationale report that accompanies this Case Study report, where key principles for policy-makers are applied.

Procedural and distributional fairness in community energy planning

This theme was central to discussions in both trial communities and is characterised by several questions; at what scale is decision making considered to be genuinely local, and to what extent should outsiders have a say? Who develops and who benefits from energy infrastructure developments, and to what extent should one community contribute to the energy needs of another?

Local means local

Both groups seemed to feel that a local level plan (on the scale of a Neighbourhood Plan) was the appropriate scale for detailed energy planning, but that a stronger national steer should be given to local areas about what the area is supposed to try to achieve (in terms of targets for saving and generating energy). This is in contrast with standard practice; the current level for detailed energy plan is the district, (where it happens at all) and energy planning is not a requirement in a Neighbourhood Plan if it is to pass examination. However, it was clear that both communities felt that the parish/neighbourhood level was an appropriate scale for energy planning, and that the outcomes of plans imposed by the district without detailed local input and control were likely to be resisted.

> I think it would be most unpopular if it was a district or county plan that said you have to have this AD plant or whatever in Moreton in order to supply Cheltenham but however if it was Moreton that said we're going to build the whatever and we are very happy to sell to the grid our surplus, it looks totally different. So the decision making has to be local, as in 'will we have it?' and the prime benefit other than the providing of electricity to Cheltenham goes to the local people who (a) put up the money and (b) put up the land [Tristan]

> I agree it should be the town level the detail, and the national level the strategy, and the two in the middle are the least appropriate because at district or county level they will shunt it off to the corner, somewhere it suits them to poke it out of the way or dump it on somebody. The actual detail must always be the local community but the national role is to devise a strategy that perhaps incentivises the things that are deemed to be best for the world, society, the Paris agreement, whatever. [Anna]

> It's about getting the information available to people ... and like you say, a national plan. [Michael]

> It has to be local people that wants the idea, then expand it to the other people, like the district. [Lucy]

> I think, from a personal point of view, my thing is if we do renewable energy, I'd like to see the project being community led, rather than sort of developer led and, to that, if we do want any wind farms, then we've got to designate the areas in the village plans and that is the only way I think we will get planning permission to build them. So we need to think about that and what's suitable. [Roland]

There were also repeated references to the need for a stronger steer from the national level about what a local area should be aiming to achieve.

> " You know like in Budapest and Sofia…where they just said, you're having it, no argument, all of the tower blocks are all heated on the CHP schemes. So why can't we just say that every 300 houses that get built here have to have a CHP? [Anna]

> " I think what would be a good idea from a national level at least, there should be some rules that every local area has to do something, even a rural parish, has to do something… I'm up for local parishes being fined if they don't do something. [Freddie]

> " I think people need to be made aware of the implications it is going to have on individual people, if this doesn't happen because if we get huge fines [from not meeting the internationally agreed targets], we're all going to have to pay for it at some point…because they're going to be charging us more tax. I think that nobody is really aware that on there, it doesn't say, "We need to make 20% or you, as a household, are going to have to pay X amount." If that happened, and every individual is aware of the implications that you're going to have to pay if this doesn't happen, would people be more motivated into getting renewables?[Mark]

> " I think the community really, somehow, has to be shown, demonstrated and explained that they're in a very privileged position at the moment because we have choice. So there's going to come a time when we're not going to have any choice at all and it's going to be imposed upon us, by whoever thinks is best for us. [Ralph]

Belonging and controlling

An added complexity arises where the meaning of home is a more fluid concept, and where there is a wider community of interest to be considered in addition to those who inhabit a given area. The Moreton in Marsh group were repeatedly drawn to the idea that others would want to influence any energy-related plans they had as a community, either because there was a shared 'Cotswold' identity or because there would be an emotional link to the area, for example from people who were not resident but who regularly visit the area for holidays and leisure purposes.

> " I asked people what they might think about having a wind turbine over Moreton or in the view to Moreton, more people that were worried about how it would look in Moreton were the people that don't actually live in Moreton, they were people from the surrounding villages that have got a view of Moreton, I think it's more important to them than it is to us. [Michael]

> " I said 'what if you took a photo of the Cotswold Stone of Moreton High Street with the Redesdale Hall and there was a great big turbine behind it?' then they said 'oh no, no, no, the tourists wouldn't want to see that, they come for the cute little cottages'. [Anna]

Distributional fairness

Considerations of long term ownership and control of energy infrastructure or initiatives were also central to the general idea of 'fairness'. Discussion on this topic formed a central part of the discussion in both Phase C workshops, having also been raised in both groups during the CESAR tool session in the Phase A workshops. It is in many ways a logical extension of the discussions on the correct scale for energy planning (which broadly concerns who determines what happens), and is the logical next consideration in energy planning; once a plan for the low-carbon transition is determined and approved, who develops and then benefits from that transition?

Community ownership and local distribution of benefits seemed to be the crux on which the acceptability of any large infrastructure in the local landscape was based. Yet it was not necessarily felt to be the case that any infrastructure would need to be developed solely by the community; the idea of working with a commercial developer was appealing so long as final control and ownership/benefit remained with the community.

> I think the best thing would be a mix of the two [community and commercial]... to get the best of the energy solution we're gonna need to get some commercial interest in there anyway to find some of the funds then people will be more interested 'cause there's already X amount in the pot and then we could get more people in'. [Michael]

> I see that [developing large renewable energy projects] as being reasonably possible, with people doing it who are being paid for their time, but if it's all volunteers... [Sarah]

> A community model isn't necessarily the people in the community doing, it's the community owning. It's the fundraising. [Tristan]

> It wouldn't get the same support [if it were a private developer] ... I think you'd get more support if it was community. [Maria]

> I think it is all about who benefits from it. You know, if big commercial companies come in and put in a large wind turbine and they do the hydro dam and the community was kept out of it and there was no gain for the community, I think you'd get a really big uproar of people dead against it... . But I think, if a lot the people in the community realise that they were actually involved in it and they were going to benefit solely, as individuals, from it, then I think that you would probably get a lot of backing towards it. [Mark]

> For the people that I spoke to ... "Well, if we can run it from the community and get benefit out of it, then we'll get much more momentum behind it because we'll get some kick back of it. [Geoff]

Helping other communities

During the phase C workshop, participants were shown how their FEL community energy plan compared with national targets in terms of the proportion of their current energy demand was met.

Once set in the context of national targets, this allowed for an additional question to be posed; 'if your community is theoretically able to produce more renewable energy than it needs, but other communities nearby are not able to do so, what planning should a community like Congresbury or Moreton do to address this issue?'

The debate that ensued in both communities is revealing in two respects; Firstly, both communities quickly moved to a position of willingness to support energy generation in their own local landscape that was not directly needed to meet their own needs so long as the ownership and benefit distribution structure was weighted in favour of the host community. Secondly, both groups predicted that any attempt to impose such a hosting arrangement on them would be strongly resisted; local decision making was crucial, though national-level steer on a target to be achieved was welcomed.

This links clearly to the idea that energy infrastructure must be developed through transparent processes with significant benefit accruing to the local community (procedural and distributional fairness), but also suggests that, with the right support structures and guidance in place, communities could be guided to develop plans for energy generation without the result being necessarily parochial in the outcome.

> If you support renewable energy, and there was a way we could supply Cheltenham with some renewable energy then that's a good thing and I can see the community would want something back from it, so Cheltenham would pay for it but overall people should support it. [Harriet]

> I agree with that entirely. The important bit is if it's Moreton that's producing it. I mean if it's Blogs & Co company that comes in and plonks it in Moreton and then says we're plonking it here to supply Cheltenham then I would think everyone would be against it. But if we were producing it... [Tristan]

> " I think we have thought we'd struggled to sell it to the community of Congresbury to have wind turbines around Congresbury to power the people in Bristol. [Paul]
>
> ...if we get paid for it... [Mark]

> " It's a difficult subject. We'd do it if we host it and get a certain percentage ... Because you could say, "Well, that turbine is Clevedon's"[11] but we get something back in our community for hosting them. [Geoff]

Participants in Congresbury immediately saw parallels with this 'hosting' arrangement and some of the existing supplies of energy and water in the local area. Though the reservoirs were considered to provide an amenity value, there was a recognition that something had been lost, in the past.

> " Don't we do that anyway with water? I mean we have reservoirs that are built outside that supply bigger metropolitan centres. We're very aware of the reservoirs and the supply of water and how...some village was flooded at some point to create them, and land was lost to create them, at a certain time. [Rufus]

> " We've got Hinkley[12]. Hinkley was built outside and supplies a big area. [Paul]

Landscape change in relation to community energy planning

This theme is a synthesis of a range of topics that were also common to both community discussions; in what circumstances have we accepted past change in the landscape? How do we value landscape change in relation to whether that change is perceived as a threat or an opportunity? And how much importance do different social groups put on landscape?

Acceptance of the need for change

To some degree there was an acceptance from both communities that change would come, and that some things that are strongly resisted now would come to be seen as normal in the future. Reference was made to other infrastructure that people now accept, but were sceptical of in the past, such as communications infrastructure. Some participants felt that decentralised energy infrastructure would become more common and feel less jarring in the landscape as a result.

> " Do you not think though, that we are now so used to the telegraph poles and wires that we don't even notice them, do you not think that the more people put up these, whatever form of renewable energy there is, that it's just part of the landscape. I know it's a slow change but ... [Harriet]

> " It's a really good point 'cause we talked about that hospital complex, for anyone that lived here before that was built it was 'whoa, that's a big blot on the landscape', but the tourists go past it and don't give it a second thought ... it's not a big wind turbine, but it's as big as an AD ... [Anna]

> " I think, if it's going to be better for us in the long run, build something in the landscape and people have to accept it because we need it. It's only a proportion of the landscape we need to use up. [Lucy]

> " So, again, it's back to what you said but I think the general thing was that everyone was aware that we are in a deal of trouble, from the planet's point of view, and that we've got to do something. [Geoff]

> " I think for the people that I spoke to, then first of all, you've got the thing about, "Well, we know we've got to do something, so let's not close our minds to any of the options." [Geoff]

11   Clevedon is a small seaside town approximately 5 miles from Congresbury.
12   Hinkley Point is approximately 18 miles from Congresbury. Participants had discussed the pylon line that passes the village as being the route that brings power from Hinkley to Bristol and beyond.

> " One thing I thought about when we did our plans here afterwards was about timescales. Now, we look at the plan and we look at what we've put down; we're not going to do it all at once … We're not going to have this great big wind turbine and we're not going to have this hydro power thing in a year or two years. It's going to take ten, twenty years, isn't it? And get those buying clubs with your LED lights and your solar panels on the houses, just as a starter, and see how people feel that their energy consumption is getting better or get a smart meter, and then, maybe in ten years' time they might think, "Actually, I'll have three or four wind turbines because it would benefit me even more and my community even more. [Dominic]

Energy development as opportunity

Landscape impact was discussed in a mature fashion, and there was a general tendency to look for maximum gain for minimum landscape impact. People recognised there were trade offs to be had and that nothing is without impact. They discussed whether one technology was more appropriate than another, with reference to the cost of generation (£ per MWh), the different landscape impacts to be had from different technologies, the appropriateness of technologies in terms of current land management practices, and the general idea that landscape change is an ongoing process, linked to economic productivity and social change.

> " And, to me, like a lot of people say, "Oh, wind turbines are horrible" and all that but if someone said to Congresbury, "You have to produce your own energy with two wind turbines or every field that you can see covered with solar panels" well, to me, that was a really big thing … what found I out was that if you had two wind turbines, big turbines, in Congresbury – and that's all you'd have was two – if you took them away and replaced them with solar, every field around the village would be covered in solar panels. Every single one … [Mark]

> " I think, before I came on Sunday, I would have been more in favour of it [ground mounted solar farms]. Now that I find that the returns are poor, obviously against it. [Paul]

> " My feeling is that with the change that we've got already in agriculture and we're seeing the solar panels going up in all the fields, then they'd be fair game for sticking a wind turbine – or ten – it's just a different use of that. The farming side of it has drastically reduced and the location, of course, is key but I mean that one that I found which was outside of the village but still under the ownership of the village [Gamblingay community wind project] was rather an entertaining prospect. [Geoff]

> " I was swimming somewhere on Wrington Lane, called Our Pool and they grow this big energy crop to heat the pool … think it's a good use of the land and farmer's growing their own energy to heat the pool. [Maria]

> " The thing is it would mean that you are getting more industries back into the village because you'd need to employ a farmer, with his land, to produce the biomass crops, so we'd probably be doing some of the farmers in the village a really good favour really by keeping them in the black. [Mark]

> " I was thinking of [biomass district heating] as a planning requirement for all new developments. [Thomas]

> " …yes, and actually the fields around which are low-lying floodplain would probably be eminently suitable for willow production. [Anna]

Also linked to this theme is the clear change in perception about landscape threat that came about with recasting development of energy infrastructure as a community-owned asset (an opportunity) rather than commercially developed, 'externally imposed' infrastructure. Nowhere was this more neatly demonstrated than in considering the discussions in the Congresbury workshop about the connection with place, and the generally accepted boundary of 'home' and 'belonging'. Having had a broad group consensus that the view of the church spire generally indicated that residents were home, the group felt comfortable with the idea of a community-owned wind turbine, even though it would dwarf their previously agreed homecoming beacon:

" Well, most of you said you saw the church spire and you knew you were home. Not any more, it would be you see the wind farm and you knew you were home... [Facilitator]

And you would see home from further away. [Ralph]

" The thing is if everybody from the village benefited from that would it be, "Oh that's horrible," or would it be a thing of pride for the village? [Mark]

And in Moreton, while it was clear that some participants felt that tourists would be driven away by the idea of large renewables, others saw it as an opportunity to bring tourists to the town.

" Yes, we were stood the other [southern] side of town and the Redesdale Hall was in front of us and we were saying to put it over the back there [outside the northern edge of town] and it would be something above, you know what I mean, it would be quite impressive. [Michael]

" People would come from miles around and sit in the pub to have lunch and see our wind turbine, it would be a tourist attraction! [Sarah]

Cost of energy considerations

Members of both groups made reference to their belief that energy affordability would be more crucial to the less well-off members of the community than any consideration of landscape impact. This related to both the level of interest that those on lower incomes had shown when participants had spoken with them during the homework phase, but also how interested these lower income residents would be in any schemes that brought direct financial benefits to the village.

" You're in a village that is fairly affluent and I would say has quite a wide readership and knowledge of these things but if you moved into an area that was predominantly social housing, where the people spend their time trying to work out how they're going to get their next meal, they don't care where that electricity comes from and what they're going to do about it because that's way beyond their thought processes. They're looking at survival rather than what they can do about it. [Paul]

" Yeah, that is my friends that he just mentioned, so that's why they don't care...the only way with people is if you said, "Oh look, if we pay X amount and build this and you'll get X amount back each year". They'd go, "Yeah, okay". [Ruben]

" They're all quite keen for it if it brings their energy bills down 'cause a lot of the people I spoke to were families on low incomes... the general thing was about bringing their bills down, that was the main concern. [Michael]

Community energy planning as a social norming process in its own right

The final thematic outcome that became clear during the Phase C workshop discussions was that the FEL methodology has significant value as a process in its own right. Participants in both groups used Phase B to think, research, and reflect on their own behaviours in addition to the actual homework task that was set.

It is of note that some participants had done extra research or changed their behaviours as a result of the Phase A workshop, and that others felt that, without their prompting, the people with whom they spoke would not have thought about these issues themselves at all. It is clear that the views of some participants changed between workshops (particularly about the relative support they felt for different renewable energy options). What was also clear was that their perceptions of what others in the community would think had also changed, for example, the quotes from Tristan and Lucy below, the tone of which suggested that they were surprised that local people had responded so positively to their ideas about developing renewable energy projects in the community.

This demonstrates that the process itself has value in increasing the opportunities for local conversation, peer learning and social norming around energy behaviours and increasing the profile of the role of communities in tackling climate change.

❝ Most interesting is that most people, when asked [during Phase B] and told there were no right or wrong answers were keen and positive; none that I spoke to were young enough to personally benefit from such a scheme, but all recognised that sustainable energy was needed'. [Tristan]

❝ 'The staff in the café, a lot of them are quite young people, and they were quite up for investing in the community in the long run, rather than the short term.' [Lucy]

❝ I did have a conversation with my neighbour about IKEA selling solar panels. And he said, why don't you get a quote for both of us. And it made me think that I'd been thinking about it as an individual. [Thomas]

❝ I've spoken to quite a lot of people about different sorts of renewable energies – just certain things like changing your light bulbs to LEDs and all that sort of stuff. A lot of people I spoke to were really interested in simple things they could do at home, like changing to LED light bulbs. Once you sort of explain to them how much money you can save, they were very, very keen on that. [Mark]

❝ I went online to find out what our current solar farms are doing. Now, the first one is 2.2 hectares site, which is more than 20,000 sq. metres...but only provide energy for 300 homes. So, as soon as I read that, I just thought, no. I was all about solar but now, I think I've changed my view. [Ruben]

❝ I should have done it a long time ago, but it did motivate me, our discussion to go out and do something about my energy consumption, so I got on the internet and did the energy switch thing, and I saved £200 a year just like that! [Ralph]

❝ I probably wouldn't have engaged [with the Neighbourhood Plan process] but I would be interested in engaging after this.[Rufus]

❝ For me, it's all about community and another aspect, taking away from this workshop, was not about the content; it was actually about the workshop itself and how you engage with local communities. You know, you don't talk about the environmental impact or how good it would be for the environment, you talk about how this could affect their daily lives, their landscapes, how they produce energy, how they use energy. A lot of my colleagues found this a fascinating exercise and the first thing they said was, "Why don't you do this everywhere? Why don't they all discuss it?" In that organisation, you don't hear about these sorts of things and a lot of my colleagues have said it's fantastic. [Dominic]

Trial findings

The main conclusions drawn from the trial findings are grouped into five themes. Three of the themes (described above) emerged from the similar discussions that the two participating communities had in the preparation and review of their FEL community energy plans, along with two further themes drawn from wider discussions from other parts of the workshops. These themes are detailed below. The themes, along with key principles for policy-makers, are further discussed in the Design and Rationale report that accompanies this Case Study report.

1.   Procedural and distributional fairness in energy planning

A   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 any energy generation developments are distributed.

B   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 district) 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.

C   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.

2.   Landscape change in relation to energy planning

A   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. 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.

B.   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.

C   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 pressure, 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.

D   Socio-economic status affects acceptability of energy infrastructure in the local landscape: More deprived respondents demonstrate a strong tendency to accept landscape change relating to new energy infrastructure if it reduces the end cost of energy to the consumer.

3. Community energy planning as a social norming process

A   People will draw other community members into detailed conversation 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 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.

B   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

4. The importance of supporting energy planning at the very local scale

A   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 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.

B   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.

C   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.

5. The relationship between local authority and community-scale energy planning

A   Energy targets mandated from the district 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. Proactive community-scale energy planning may help avoid conflict in future implementation -   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.

B   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 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.

C   People do not necessarily define 'home' along statutory planning lines: Allowing groups to describe their own definition of 'home' before they discuss energy planning reveals a great deal about the natural constituency that must be consulted on any local energy plan. These boundaries may not conform to existing statutory boundaries, and may instead be linked to other socio-economic or cultural structures, such as common industry and agricultural practices, or landscape designations.

Conclusion

The Future Energy Landscapes community engagement trials have shown 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. A group of interested lay people will, within a matter of a few short hours, begin to take into account a range of nuances that do not normally come into play in the development of district-level or national-level policy planning. Both groups entered into discussion around the process of development, rather than the outcome of any particular development. Rather than seeing just 'a hydro plant' or 'a solar farm', participants quickly begin to enter conversations about who would develop such a project, through what ownership structure, who would need to be involved, who would be impacted, and so on.

Considering energy planning at such a local level means it is almost impossible to avoid site-specific discussion, once the principles of the range of available technologies are understood. People discuss who might be impacted, who might benefit, and what technical barriers there might be to such a development (such as different dig-cost implications in alternative potential heat networks, and how that might affect their economic viability, or where the feedstock for an AD plant would come from). People also bring into play their views on the real social interactions that would need to happen to make any particular development successful; who would lead a local retrofit scheme or behaviour change campaign, or who would oppose a particular development in a particular form. This means that the plan that emerges is informed by not only the views of the representative group of participants taking part in the process, but by their understanding of how their wider community will react. Local Planning Authorities will find that the case studies provide useful evidence for supporting and resourcing community-scale energy planning in their areas.

Appendix A: Community Profile - Congresbury

The settlement

Situated in a rural area approximately 13 miles south of Bristol, the village of Congresbury in North Somerset has a population of around 3,500. Its unusual name (pronounced 'Kongzbury') is derived from St Congar, a Welsh Abbot who founded a monastery on nearby Cadbury Hill some time in the early 6th century. Congresbury has been an established settlement for more than 900 years, with an entry in the Domesday Book showing 107 households, a large settlement for that time. The parish church of St Andrew dates from the 13th century.

Today, Congresbury has a population of around 3,500 people in approximately 1,500 households. The population is 95% white-British, around 4% white-Irish, with a very tiny fraction of less than 1% identifying as Black and Minority Ethnic (BAME). The age profile of the village is evenly distributed.

Age	0-20 years	22.5%
	21-45 years	28.7%
	46-60 years	20.5%
	60+ years	28.3%

It has a good range of local businesses, ranging from a two small supermarkets through to several clothes shops, butcher, baker, hairdresser, carpet shop, car dealership and several specialist retailers such as a piano shop. There is a local primary school but no secondary school. There are also several small community venues, and plans for a new community hall and sports facility. Congresbury is ranked 25,838 out of 32,844 LSOAs in England, where 1 is the most deprived LSOA. This puts it amongst the 30% least deprived neighbourhoods in the country.

Land use and landscape

The river Yeo runs through the centre of the village, with footpaths following the river through and beyond the village linking to a wider network of local walking routes. The Millennium Green and a weir in the centre of the village provide green open space within the village centre, with some local people using the river and weir for swimming and diving. The Kings Wood to the north east of the village, with remnants of a medieval mining industry, provides further opportunities for walking and exploring, and the Strawberry Line, a long distance footpath following the route of a disused local railway, is also a well-used local leisure facility.

The village sits in a broadly rural area, which is not protected by any landscape designations. The surrounding topography to the south and east of the village is very flat, typical of the Somerset levels, and displays many examples of the drainage management systems commonly employed in that area (traditional ditch networks known as 'rhynes' or 'reans'). Dairying, a significant part of the local rural economy in past decades, has declined. By contrast, the land to the north and east rises up two hills (Cadbury Hill, site of an old Iron Age Hill fort) and Rhodyate Hill. With elevations of around 300 feet, this means that the approach to the village from the north and east reveals occasionally far-reaching vistas across agricultural land.

The area around the church, Broad Street and the High Street was designated a conservation area in 1990.

Development pressure

Congresbury's proximity to Bristol makes it a prime target for housing developers. In the past 6 years there have been multiple applications to build housing on land at the edge of the village.

Barratt Homes were refused planning permission in December 2015 to build 80 new homes at the southern end of Congresbury. This was after sustained objection from the local Congresbury Residents Action Group (CRAG). There have been a number of other housing development proposals including applications by Gladman Developments (outline planning permission applied for) and Strongvox Ltd to build up to 70 new homes on the north-easterly side

of the village and 14 homes on the south-easterly side of the village respectively. They have been subject to multiple resident objections. The Strongvox development for 14 homes has been granted permission as of 9 June 2016.

The village is at the very early stages of developing a Neighbourhood Plan. At the time of running the Future Energy Landscapes workshops, very early scoping work on this plan had been carried out, but the team working on it consisted of only six local volunteers.

Energy

While the north of the village is connected to the mains gas network, connectivity is patchier to the south of the River Yeo, with many households at this end of the village relying on oil or LPG for their heating. In the past 2 years, three separate solar farms have been built on the edges of the village; Iwood Lane (8.0MW), Carditch Drove (5MW) and Yeowood (1.3MW).

The workshop

There were 11 participants in the Congresbury workshops. The all-day session was held on Sunday 24 January 2016, with a follow-up evening workshop on Monday 1 February.

Name	Age	Gender	Employment status	Ethnic origin
Dominic	35-44	Male	Full time employed	White: British
Geoff	55-64	Male	Retired	White: British
Paul	65+	Male	Retired	White: British
Maria	65+	Female	Retired	White: British
Ralph	65+	Male	Retired	White: British
Joanne	65+	Female	Retired	White: British
Roland	65+	Male	Retired	White: British
Amber	45-54	Female	Not given	Not given
Rufus	45-54	Male	Self employment	White: British
Ruben	25-34	Male	Employed	White: British
Mark	25-34	Male	Self employment	White: British

8.0MW solar farm on the outskirts of Congresbury

Congresbury
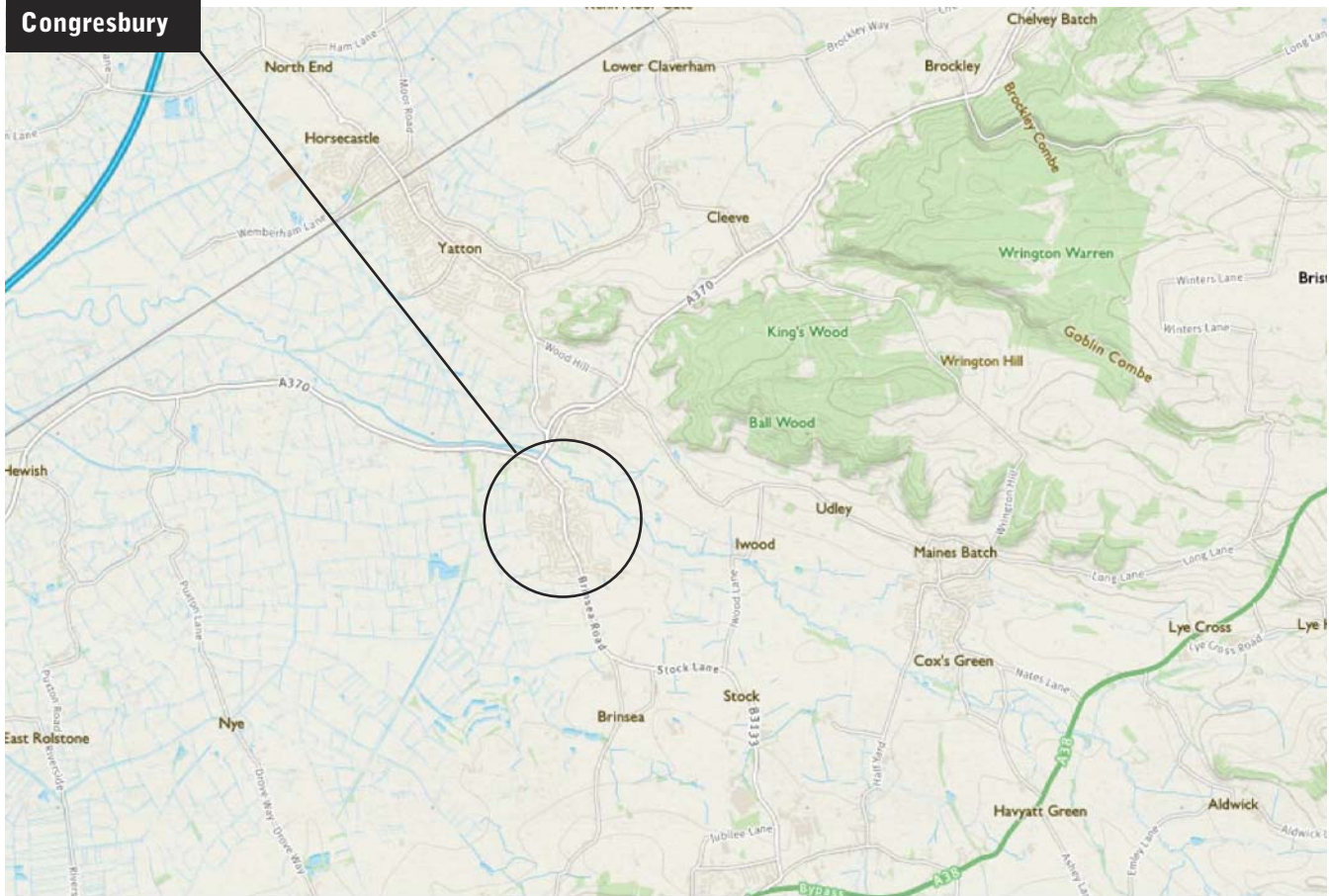
Appendix B: Community Profile- Moreton in Marsh

The settlement

Moreton in Marsh is one of the principal market towns in the north Cotswolds in north-eastern Gloucestershire and lies on the Roman Fosse Way road. The first settlement was a Roman fort dating back to 43 AD; there was a Saxon town and then, later in the 9th century, the town became part of the Deerhurst monastery. Moreton was in the possession of the estate of Westminster Abbey for hundreds of years from the 11th century until the Victorian period. The settlement lies approximately 17 miles from Stratford to the north and 28 miles from Oxford to the south-east.

At the 2011 census, Moreton in Marsh had a population of around 3,500 in approximately 1,800 households – however, almost 700 new homes have been constructed since that time. The population at the last census was 96% white-British, around 3% white-Irish, with a very tiny fraction of less than 1% identifying as Black and Minority Ethnic (BAME). The age profile of the village was evenly distributed.

Age	0-20 years	19%
	21-45 years	28%
	46-60 years	20%
	60+ years	33%

Moreton is famous for its wide high street edged by attractive 18th-century Cotswold stone buildings. Moreton has had a market charter since 1227 and still has a weekly market today. Moreton benefits from having a railway station linking the town to London Paddington as well as Oxford which makes it popular with commuters.

The town has a small supermarket and two convenience stores, a butcher and a delicatessen, as well as a shoe shop and toy shop. Much of the retail space is occupied by a range of specialist retailers, including a Belgian beer store, oriental rug merchant, boutique furniture store and hunting outfitters. The town also has a large number of antique dealers, art galleries, gift shops, restaurants, cafes and tea shops, and four former coaching inns, along with several other pubs. There are two local primary schools (one independent) but no secondary school. There are also several small community venues. Moreton in Marsh ranks 18,630 out of 32,844 LSOAs in England, where 1 is the most deprived LSOA. This is amongst the 50% least deprived neighbourhoods in the country.

Land use and landscape

The river Evenlode runs around the edge of Moreton, and floods have been a regular occurrence. In 2007, 5,000 houses and businesses were flooded in Gloucestershire which resulted in Cotswold District Council investing significantly in flood alleviation and protection.

Less than two miles from Moreton is the Four Shire Stone which historically marked the boundaries of the counties of Gloucestershire, Warwickshire, Oxfordshire and Worcestershire until the boundary reorganisation in 1931 which left only the boundaries of the former three counties. The area is traditionally agricultural, mostly arable and sheep farming, though unlike other Cotswold towns such as Cirencester and Chipping Campden, its wealth was built on its strategic position as a coaching town, rather than as a centre for wool production.

The topography of the land rises to the west, past the Batsford Estate and arboretum and up to the ridge that separates this part of the Cotswolds from the Vale of Evesham. The views from the ridge at Batsford and the nearby village of Bourton on the Hill are expansive, giving panoramic views across an expansive Cotswold view.

The High Street and all roads immediately adjacent are a Conservation Area, and most of the town also falls within the Cotswolds Area of Outstanding Natural Beauty, which follows a line along the Fosse Way (the main road into the town) and then extends east to follow the railway. Interestingly, this means that a large part of the view to the east of the town (as seen from the ridge at Batsford/Bourton on the Hill) does not fall within the AONB boundary.
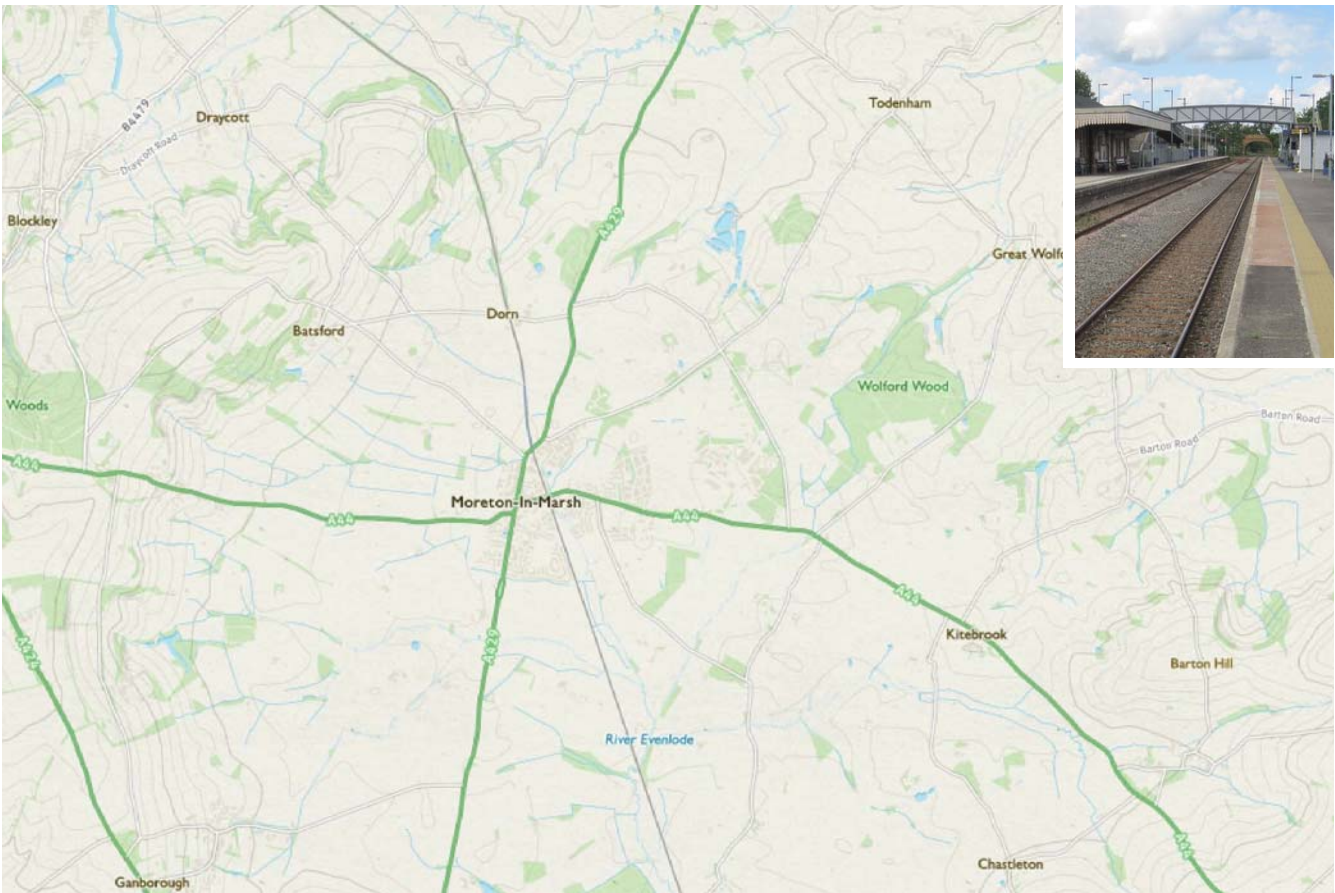
Development pressure

Moreton in Marsh is designated in Cotswold District Council's local plan as a 'principal settlement' and has been given a defined development boundary. The district council's aim is to restrict housing development across the district to the principal settlements only, in an attempt to ensure new homes are built in places with adequate services and transport links. As such, developer pressure for new housing in Moreton over the last four years has been unrelenting; more than 586 new homes have been built on the site of the National Fire Services college to the east of the town, with a further 140 under construction Todenham Road to the north. The former post office, GP surgery and police station between them have been converted into 19 homes, the old hospital site is currently being developed into 34 new homes, and there is a current planning application for up to 600 new homes at the south entrance to the town. New homes already built or under construction will increase the population of the town by around 1,635 (46%) from the 2011 census by the time of the 2021 census, with a further 1,260 (representing a total population increase of around 82%) if the new application for 600 homes is approved .

Energy

Around 38% of homes in the town are off the gas grid, though some of the new developments have access to private gas networks meaning the true percentage is likely to be lower. There are no large renewable energy installations immediately near the town, though there are small solar farms between 2 and 4 miles away - one at Longborough and one on the A44 towards Evesham. There is also an anaerobic digester at the Northwick Estate, again along the A44 towards Evesham.

The workshop

There were nine participants in the Moreton in Marsh workshops. An all-day session was held on Saturday 23 April 2016, with a follow-up evening workshop on Tuesday 3 May.

Name	Age	Gender	Employment status	Ethnic origin
Thomas	65+	Male	Retired	White: British
Sarah	45-54	Female	Part-time employed	White: British
Anna	55-64	Female	Employed	White: Irish
Tristan	65+	Male	Retired	White: British
Harriet	18-24	Female	Employed	White: British
Freddie	35-44	Male	Unemployed	White: British
Lucy	25-34	Female	Full-time employed	White: British
Joseph	55-64	Male	Retired	White: British
Michael	35-44	Male	Unemployed	White: British

13   Based on the current occupancy rate of ~2.1 persons per household in Moreton in Marsh (2011 census). This may be an underestimate since many of the new homes are family homes rather than smaller units, and the current household occupancy structure is heavily skewed towards 1 & 2 person households.

Appendix C: Detail of community participant activity between workshops

Participant	Spoke to			Action		Object	Notes
	Partner or housemate	Friends, peers or neighbours	Colleagues	Research or planning	Behaviour change		
Congresbury							
Maria	✓	✓					Alongside speaking to friends and neighbours, Maria also noted that her own reflections raised concerns about whether a hydro project would restrict access to the weir or riverbank, and that had noticed energy crops grown nearby and felt it was an 'appropriate' use of the land.
Joanne		✓		✓		✓	Brought a photo of her existing oven – thinking of replacing it and mulling over options in light of Phase A workshop, and whether community appliance replacement schemes would work.
Amber		✓				✓	Brought a photo of local solar farm showing high fences and CCTV. Concerns about restricted access. Own reflections on talking to friends who had been involved in a biomass project at a community building were that individual action should be stressed more, not large scale renewables.
Paul	✓	✓				✓	Brought photo of the village fete, to illustrate strength of community spirit. Spoke to a large group of peers in the local pub about both hydro (broadly supported) and wind (not popular), but noted that in his conversation he did not stress community ownership models. Was no longer as supportive of large scale solar as he had been before the project began, as now felt he had a better grasp of landscape impact vs output.
Geoff	✓	✓		✓			Investigated community-owned renewable energy projects elsewhere (Gamblingay turbine was given as an example). Spoke to members of the board of the Congresbury Wildlife Action Group and surprised to find general support for large wind (so long as bats not affected). Had explained community-owned structure during this conversation. Was no longer as supportive of large scale solar as he had been before the project began, as now felt he had a better grasp of landscape impact vs output.
Rufus	✓	✓				✓	Brought broken small tree branches from his garden – explained that this illustrated to him how constant the wind resource in Congresbury is. Expressed concern that in his conversation with his wife, he felt that the group had leaned towards large scale solutions as easier than distributed energy saving and behaviour change.
Ruben		✓		✓			Had researched both solar farms already constructed on the edge of Congresbury, and calculated how many homes they could provide electricity for. Was no longer as supportive of large scale solar as he had been before the project began, as now felt he had a better grasp of landscape impact vs output. Mentioned that his friends simply did not care where their energy came from, so long as it was affordable, and that he could not interest them in the idea of large renewable energy in the local landscape (they did not care either way).
Mark	✓	✓		✓	✓		Had calculated difference between how many acres of solar would be needed vs how many large wind turbines to meet all of Congresbury's electricity needs. Was no longer as supportive of large scale solar as he had been before the project began, as now felt he had a better grasp of landscape impact vs output, and felt large scale wind would be more acceptable.

Appendix C: cont

Participant	Spoke to			Action		Object	Notes
	Partner or housemate	Friends, peers or neighbours	Colleagues	Research or planning	Behaviour change		
Congresbury cont.							
Roland		✓		✓			Had researched what river flow and what wind speeds would be needed for either a hydro or wind project to proceed, and had spoken to an energy consultant living in the village about technical barriers to developing these. Had considered how to allocate a wind site via the Neighbourhood Plan process.
Ralph					✓		Switched electricity and gas tariff using online switching (saving £200 per annum) and had ordered an electricity monitor.
Dominic	✓		✓				Had spoken to a large group of colleagues at the Environment Agency (not working in energy or planning) about the process and the value of it as a process in itself.
Moreton in Marsh							
Anna		✓		✓			Photo-shopped image of landscape between Moreton and Longbourough, showing large wind turbine, that she had used in conversations with friends and colleagues. Stressed that siting was completely crucial, and that many she spoke to felt the impact on tourism would be negative.
Harriet					✓		Noticed an AD plant on a drive that she does regularly that she had never noticed before.
Lucy	✓		✓				Spoke with colleagues and felt that they would not have discussed these topics before but would be more open to discussion now.
Sarah	✓	✓					Noticed an AD plant on a drive that she does regularly that she had never noticed before.
Joseph	✓						Spoke with partner about vertical access wind turbines and solar, and how wind, biomass and solar should be a requirement on a proposed new supermarket on the southern edge of town.
Michael	✓	✓					Had met with Freddie and discussed potential locations for wind turbine outside northern boundary of town. Felt that tourism could be boosted by such a 'landmark' project. Mentioned that most people he spoke with were low income families and that affordability of energy was the key issue for them.
Freddie	✓						Had met with Michael and discussed potential locations for wind turbine outside northern boundary of town. Felt that tourism could be boosted by such a 'landmark' project.
Thomas	✓					✓	Brought photographs of wind farm near Goonhilly, Cornwall, near his previous home. Thoughts were that Moreton did have a site that was appropriate for large wind or AD (the Fire Services College, previously an airfield), because it was already 'industrialised' in the same way as the Goonhilly satellite station he was familiar with.
Tristan	✓	✓				✓	Brought written report of interviews with two sets of neighbours, where he had proposed the energy saving, AD, wind and roof mounted solar elements of the group's CESAR outputs, and sought their views. He had expected (and was proved right) that they would support AD and roof mounted solar, but expressed surprise at their broad support for a wind project.

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