

Carbon Co-op

Response to Ofgem Call For Input: Future of local energy institutions and governance

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Carbon Co-op: who we are, what we do

Carbon Co-op is a community benefit society, a not-for-profit community energy organisation that helps people and communities to make the significant reductions in energy and carbon emissions we need to tackle climate change.

Established in 2011, we are based in the North West of England but operate around the UK, we have 16 paid members of staff and a householder membership of 450 people.

As well as ensuring we develop the tools, services and models necessary to decarbonise our homes, our founding principles also encompass:

- **Energy Justice** - the principle that those with more resources and better able to take action have a responsibility to do so and those without resources should be supported to take action, fundamentally this entails a transfer of resources from rich to poor.
- **Collective action** as a means of tackling energy system transition challenges - people more readily engage in collective actions as opposed to individual ones, with an understanding that people can do more together.
- **Co-operative action** as a way to ensure that those participating in climate action are able to own, control and benefit from the energy transition. We subscribe to the international co-operative principles.

We are members of sectoral bodies including Co-operatives UK, Community Energy England and RESCoop.

A number of our projects and services are relevant to local energy institutions and governance, specifically:

- **Greater Manchester Local Energy Market (GMLEM):** participation in the Industrial Strategy Challenge funded Greater Manchester local energy. Our role has been to facilitate citizen engagement in the project and this has involved a range of actions including running a Citizen Jury (, specifically addressing local energy markets and the ownership of intermediaries and coordinating market actors.
- **Powershaper Flex:** our local flexibility aggregator service, currently at R&D phase we have operated pilot projects including BEIS-funded project OpenDSR which specifically looked at the application of common open data standards with regards to local flexibility markets, and RESCoopVPP, a Horizon 2020 project that is installing HEMS in pilot households to leverage flexibility in response to DNO campaigns.
- **Oldham Energy Futures:** a two year Google Foundation project engaging communities in the Oldham area of Greater Manchester in participatory local area energy planning with the establishment of three energy pilot projects. The project has seen the development of a Community-led Energy Planning methodology which we advocate for use in neighbourhoods to inform energy system transition.
- **People Powered Retrofit:** an end to end householder retrofit service that operates to support those able to pay to retrofit their homes to deep retrofit standards.

GMLEM Citizen Jury



This GMLEM citizen jury was held in May 2022, to involve citizens in deciding who might own a local energy market and the appropriate levels of transparency and scrutiny required. Carbon Co-op had led on citizen engagement throughout the GMLEM project and prior to organising the citizen jury, had facilitated engagement

activities to understand people's views on the GMLEM and the future of energy. The topic of ownership and trust came up often. In particular, people were keen that the LEM would be more transparent than the current market when it came to where renewable energy was coming from and how profits were being used.

The results of the jury will be published by the end of June 2022.

Legitimacy - an overarching concept

We believe that the large-scale changes we require to the operation and make up of the energy system to meet the challenge of climate change, in particular the widespread remote automation of in-home systems, devices and services, will require the involvement, participation and consent of citizens.

Above all, Ofgem, BEIS and other actors, need to seek legitimacy in the eyes of the public for the cost, disruption and changes we know are required. Legitimacy is a concept that incorporates various elements such as checks and balances, democratic control, accountability, fairness and transparency.

In order to achieve legitimacy, citizens and stakeholder groups should be involved in the energy transition process in a meaningful way, their views should be sought at regular intervals and there should be transparency in how their input has shaped changes.

We believe that achieving legitimacy is more than a simple matter of consultation and needs to be incorporated into the operation and governance of the future energy system in the form of democratic control and ownership of key infrastructure and the energy system actors themselves. This can be achieved in numerous ways from the use of citizen juries and panels, local authorities, co-operatives, trusts, social enterprises, public ownership, mutuals and public-public or public-community partnerships.

The dangers of not achieving legitimacy in the energy transition are many and various, they range from systems and processes that are poorly designed or fail to operate in the interests of the end users through to widespread public and political resistance to energy system transition changes.

Questions and Carbon Co-op's response:

1. Are the three energy system functions we outline (energy system planning, market facilitation of flexible resources and real time operation of local energy networks) the ones we should be focusing on to address the energy system changes we outline?

The need for greater citizen involvement in energy planning

LAEP methodology is weak in the community engagement processes it outlines. Beyond offering a long list of stakeholders energy system planners should engage in, it fails to show how that engagement process could happen and it downplays the role of 'wider public engagement'. We believe that citizen engagement is an integral part of the process, especially for low-income communities.

We argue that the 'Community-led Energy Planning' approach developed in Oldham Energy Futures, should be a focus within energy system planning in conjunction with LAEP. LAEP delivers a robust technical analysis, with stakeholder input, as to how to deliver the energy transition locally. However, LAEP approaches lack insights and involvement from local people and do not have a robust mechanism to ascertain, or build, public consent for different energy transition interventions.

In response to this gap, the 'Community-led Energy Planning' process, results in the co-creation of a Community-Led Energy Action Plan, developed by a neighbourhood group. The plan relates to themes addressed in the LAEP process, whilst outlining solutions identified and prioritised by local people in response to these issues.

Community-led Energy Planning can provide deep contextual insight to the reality of how energy interventions can be delivered. For officers working within local authorities, advancing recommendations following the LAEP, community-led energy planning can also offer a realistic idea of which elements of the transition will be supported by the community and where there are opportunities for alternative forms of local ownership within the locality's decarbonised energy system.

Energy efficiency

In addition to the three energy system functions Ofgem have outlined, strategic, area based demand reduction also needs to be focused on to address the energy system changes outlined. We recommend that this is considered within energy system planning and it is encouraging to see an energy efficiency role for DNOs explicitly addressed in RIIO-ED2.

With the expected rapid growth in heat pumps and the plan to deploy 600,000 every year by 2028, homes will need to meet increased energy efficiency standards for heat pumps to be an efficient, cost effective option for people. Currently many existing properties do not meet these standards. Although we agree that heat pumps are the way forward for decarbonisation the following needs to be considered as part of the energy system functions Ofgem have outlined:

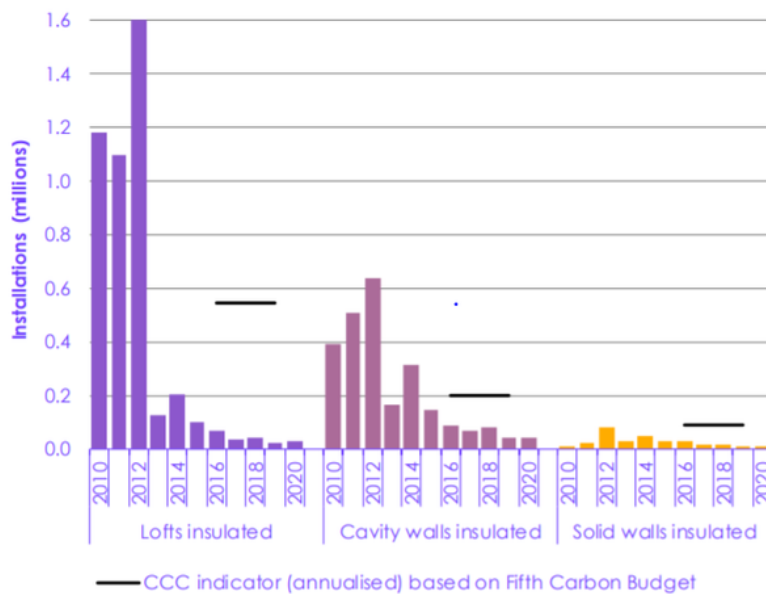
- Supporting people to understand how a heat pump would work in their home
- Supporting people with the purchasing decisions associated with heat pumps
- Energy efficiency and supporting householders to retrofit homes to appropriate performance standards for heat pumps to be cost effective and efficient.
- Supporting robust monitoring and evaluation of heat pump installations to inform householder behaviour and the future development of heat pump installation and design best practice.

A note on markets

Local Energy Markets and the creation of incentives to drive flexibility *may* be an effective way to achieve beneficial outcomes for wider society, however, it should be noted that energy markets do not always function effectively.

The recent collapse of energy suppliers and the consequent costs for bill payers is a demonstration of a market failure. Similarly, the Energy Company Obligation (ECO) market is intended to incentivise the uptake of energy efficiency measures, however corporate capture, influence and lobbying has seen the ECO market much reduced in scope, scale and effectiveness, with the Climate Change Committee graph below showing the huge decrease in energy efficiency measures installed during the operation of the scheme.

Figure 3.4 Home insulation rates by measure and year



Source: DECC (2014) Data tables: Green Deal, ECO and Insulation Levels, up to March 2014, Green Deal, Energy Company Obligation (ECO) and Insulation Levels in Great Britain; BEIS (2021) Household Energy Efficiency Statistics: Headline Tables; CCC analysis.
Notes: The CCC indicator shown represents the annualised rates of installation based on the Committee's 2015 advice on the Fifth Carbon Budget, which we judged to be a realistic and appropriate annualised installation rate at that time.

We argue that the involvement of citizens in the governance and operation of energy system actors and other progressive governance arrangements are a way to ensure not only legitimacy in the operation of markets but to guard against the corruption of these markets for private, corporate benefit.

2. Do you agree with the criteria we have set out for assessing the effectiveness of institutional and governance arrangements?

As outlined above, the need to ensure legitimacy and citizen acceptance of energy system changes is key to ensuring their long term success. We find that the criteria set out would not assess the effectiveness of institutional and governance arrangements in providing an essential service for people in the UK.

We propose including other metrics such as 'understanding' or 'empathy' as a criteria in addition to 'competence', stating that: institutions have the necessary understanding of the varying energy needs of people within the region.' It is in our view that assessing against understanding of local needs would also support innovation, throughout the transition, to be both smart and fair.

We also propose adding a criteria to assess for 'democratic control' in addition to coordination, stating that 'institutions have accessible forums and procedures for

including a diversity of voices in decision making, for example local energy action planning, citizen juries, consumer panels and open citizen hearings on annual reports’

3. Do you agree with our assessment of how far the current institutional arrangements are, or are not, well suited to deliver the three key energy system functions?

Local flexibility markets, open standards and trust

We welcome the acknowledgement that DNO local flexibility markets need to grow in scope and scale to meet energy system challenges.

The key learning from our local flexibility DSR pilots has been that whilst there is significant appetite amongst ‘early adopters’ householders to provide flexibility, their ability to control their own assets is limited by lack of open control mechanisms. Where control mechanisms are available they are often siloed by manufacturer, meaning that within the modern smart home with diverse switchable load, the majority of potential flexibility is lost. We believe there is a role for the Ofgem/BEIS to mandate the use of common, open standards such as SGReady for heat pumps / OCPP for electric vehicles, to remove some of these limitations.

As Ofgem rightly points out, trust is a vital element in flexibility markets. It is therefore essential to adopt a robust and transparent mechanism for quantifying the delivery of flexibility. There is much to be learned from the experience of the advanced California flexibility markets in this regard in the use of open source methodologies and tools.

Local authorities and planning

Our experience of working within authority planning processes is that at present, local authorities lack the competence, capacity and information to engage in both long term strategic and short term energy system planning activities and decisions. Little or no public engagement is carried out on energy system issues and both planners and the public lack the technical capacity to understand the relevant issues. As a result often perverse planning decisions are made without reference to energy system infrastructure requirements, with opportunities missed and new problems created.

Ofgem’s plans for more integrated planning at a local level are admirable and a step in the right direction but without engaging with the local authority planning system as it currently stands these efforts are bound to fail.

4. Overall, what do you consider the biggest blocker to the realisation of effective energy system planning and operation at sub-national level?

- Ensuring the trust, legitimacy and buy in of citizens.
- The reliance on local authority planning functions at a time when they lack the capacity to be adequately involved.
- Technical barriers to the leveraging of local flexibility - and the consequent need for greater interoperability through the use of common, open standards

5. Do you agree with the opportunities of change we outline and the potential benefits they may create?

We agree that improved facilitation of information exchange and improved coordination between actors will be beneficial. However it is currently unclear from the document how clear accountability for energy systems functions at a sub-national level will be secured.

Accountability needs to be considered within the different levels of understanding and engagement. As part of the Citizen Jury process in GMLEM, we considered how local energy markets are owned and governed and how citizens/consumers might be involved in this process. For example, this could happen in a number of ways, e.g. a citizen/consumer panel meets twice a year with the board of directors where they have the opportunity to directly question the activities and finances. To recruit a panel representative of the demographics of the local area and to avoid self-selection bias, we recommend using the organisations such as the Sortition Foundation <https://www.sortitionfoundation.org/services>.

Information needs to be presented in lay terms as much as possible and support provided by experts for panel members to understand more technical information. Access to the panel will also need to be considered including paying members for their time and travel or providing support with accessing digital files or online meeting software. This opportunity for change in how citizens are empowered to engage in the energy system function at a sub-national level could improve overall engagement in a local energy market and ensure that the system function best meets the needs of local people. These recommendations are based on the work of a Citizen Jury who deliberated the topic of Local Energy Market ownership and governance in Greater Manchester in May 2022.

6. Are there additional opportunities for change and benefits that we have not set out?

1. Climate emergency and energy transition are not standalone issues. Climate interventions can improve health and wellbeing, and community-led energy planning can be used to address social justice issues (such as fuel poverty) and build community wealth.

As such initiators could consider where this activity intersects with their current workstreams and budgets. If they have climate programmes which require community engagement, they could build in funding to enable this capacity building in preparation for future activity, or as part of other programmes such as Local Area Energy Planning. Similarly, if they have a team dedicated to community engagement this approach may fit within its scope and budget.

2. Community-led Energy Planning creates a way for communities and local stakeholders to progress the energy transition as prioritised by local people. Community-led Energy Planning is an approach which bridges the gap - enabling local authorities and other local stakeholders to connect with communities so that they can help to shape and prioritise climate action at the local level.
3. The process of working with a neighbourhood group to co-produce a Community-Led Energy Action Plan creates opportunities to collect experiential and local data. This data can help local authorities and other relevant local stakeholders to understand the realities of what energy transition could and should look like in a place based on local insight.

This approach can be used in tandem with other processes, such as Local Area Energy Planning, to help set priorities for action, identify elements of transition which will have greater community buy-in and highlight opportunities for community-ownership of energy solutions. This can help local public sector organisations to answer the question of where to start with local energy transition and where there are opportunities for local ownership of solutions.

4. When discussing the ownership and governance of a local energy market with the GMLEM Citizen Jury, the jury recommended (after hearing presentations from expert witnesses and jury deliberation) that *“owners and operators should be based within the local area otherwise this is a wasted opportunity to create local jobs, improve community engagement and confidence, and to retain local finances.”*

7. We set out a number of risks associated with change. Do you agree with these risks and the potential costs they create? Are there additional risks of change and costs that have not been set out?

Increased engagement complexity, as stated in section 3.34 would not only 'decrease consumer satisfaction' but also increase levels of stress and anxiety for people. This also further degrades the level of trust people have in the new system as it would appear poorly considered if the user experience is worse than it was previously.

10. What do you consider to be the biggest implementation challenges we should focus on mitigating?

1. The technical complexity of the energy system and the challenge this presents citizens when scrutinising the operation of energy system functions at a sub-national level.
2. A lack of trust and legitimacy among citizens about engagement processes led by local authorities or social housing providers can be a risk for processes like Community-led Energy Planning.
3. People in lower-income neighbourhoods are far less likely to have the financial capital, social capital and time to engage with or drive climate action which might deliver benefits back into their neighbourhoods. To take an approach to transition which centres on climate justice, councils must work with the people most vulnerable to the changes needed to address climate change to shape and prioritise interventions based on their experiences.

12. Are there other key changes taking place in the energy sector which we have not identified and should take account of?

1. Improving the energy efficiency of homes, whilst one of the most cost effective ways to tackle energy system stresses is still a huge challenge and the UK lacks an effective strategy to tackle this. DNOs and other energy system actors could play a role in this, especially given the reference to energy efficiency in RIIO ED2, however, DNO as unprepared as to how to deliver energy efficiency programmes and lack the skills and capacity to do so.
2. Energy price rises and how changes to the energy system function could affect energy efficiency and the heat pump roll out. Also the impact the energy price rises will have on levels of engagement and trust in the energy system (potentially higher levels of engagement and lower levels of trust).