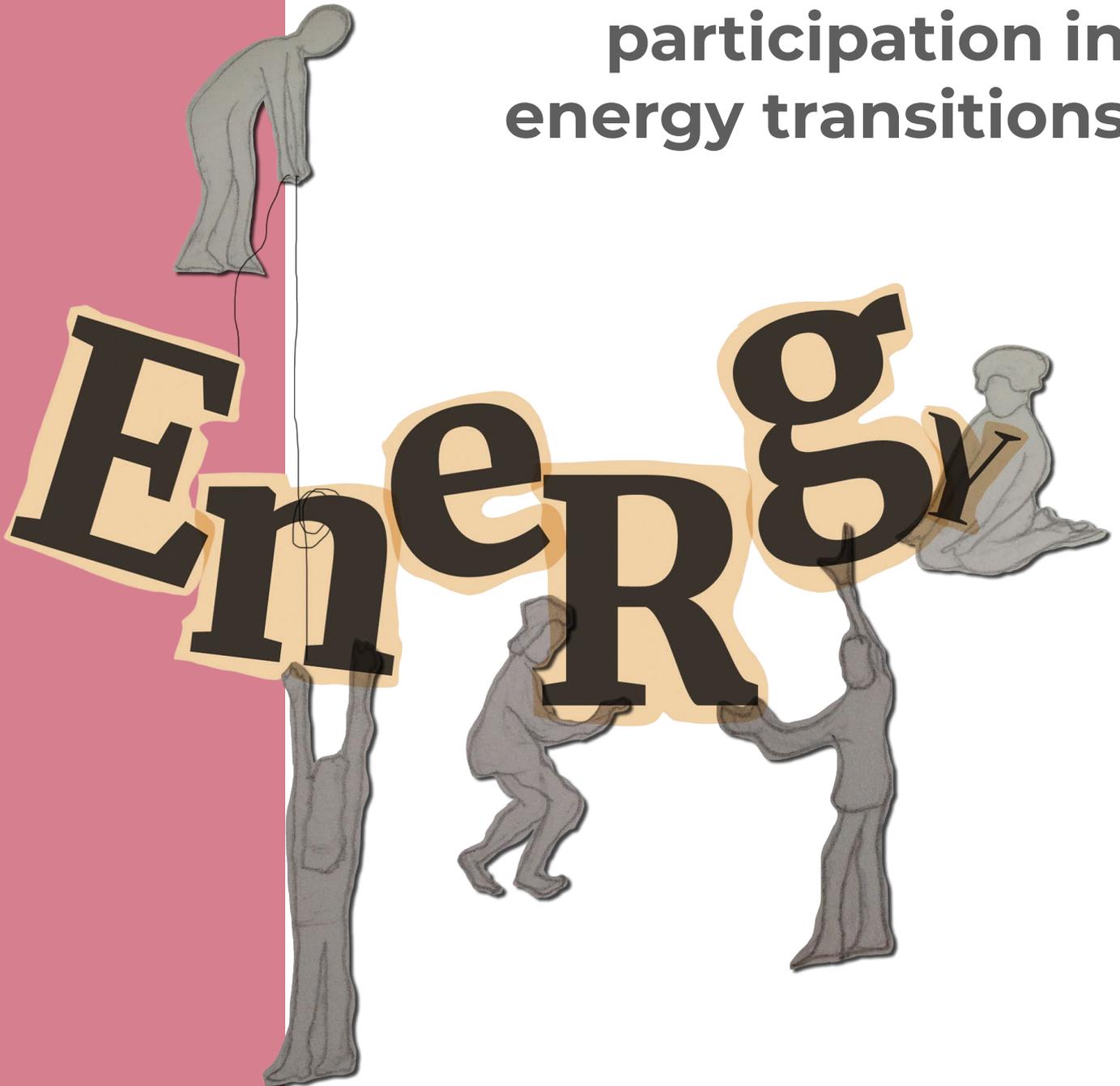


How Local Authorities can encourage citizen participation in energy transitions



Prepared for Energy Cities

Funded by the UKERC Whole Systems Networking Fund

April 2020

How Local Authorities can encourage citizen participation in energy transitions

April 2020

Sioned Haf*

SCHOOL OF NATURAL RESOURCES,
PRIFYSGOL BANGOR UNIVERSITY, UK.

Rosie Robison

GLOBAL SUSTAINABILITY INSTITUTE,
ANGLIA RUSKIN UNIVERSITY, UK

*Corresponding author: sioned.haf@bangor.ac.uk

Suggested citation: Haf, S. and Robison, R., 2020. *How Local Authorities can encourage citizen participation in energy transitions*. London: UK Energy Research Centre.

Keywords: Energy Transition, Citizen Participation, Local Authorities, Climate Action, Community Energy.

Energy-PIECES

Energy Policy Insights from Early Career Events and Secondments

PROJECT CO-ORDINATED BY



PROJECT FUNDED BY



PROJECT BASED ON COLLABORATION WITH



Executive Summary

The new European Union (EU) ‘Clean Energy for all Europeans’ package, agreed upon by the European Parliament in March 2019, seeks to strengthen the rights of citizens to produce, sell, store and consume renewable energy with ease and support, and without discrimination (European Commission, 2019). This development could mark the beginning of a more supportive platform for citizen-led energy initiatives across the EU. It may play a role in encouraging more citizens to actively participate as stakeholders in addressing the current energy challenges. These challenges, commonly referred to as the energy ‘trilemma’, are to: i) lower carbon emissions, ii) safeguard a secure energy supply and iii) ensure affordable energy prices.

For citizens and communities to benefit from initiatives such as the Clean Energy package, Local Authorities – as the closest body of government to citizens – play an important role in translating new opportunities, as well as supporting the myriad of projects and initiatives which already exist. Arguably, ensuring that more citizens and local communities benefit from the energy transition should be a priority for any Local Authority concerned with the wellbeing and future development of the geographic communities over which they govern. The aim of this report is therefore to discuss why citizen participation is important in energy transitions (with a focus on Europe), to illustrate the diverse ways in which citizens do participate and to understand the role Local Authorities can take in upscaling participation.

To date, policy development in the field of energy transitions tends to have assumed technological aspects will be the main agents for change. Far less consideration has been given to the social aspects of the energy transition. Top-down policy making and implementation, driven by technological evidence alone, will not galvanize citizens to contribute to the energy transition. By drawing on energy-related Social Sciences and Humanities (energy-SSH) literature, this report gives an evidence base for a number of social answers to energy transition challenges. This report has been delivered as a part of an Energy-PIECES secondment hosted by Energy Cities – The European association of Local Authorities in energy transition.

Key recommendations are as follows:

- The energy sector to date has been led by deep-set relationships between traditional energy incumbents and governments, leaving little room for citizen participation (at all levels – policy, production, distribution etc.). Considerable energy-SSH research proposes that **the energy transition needs to be more inclusive of a wider set of people** if it is to gain any traction. This can be achieved through
 - firstly understanding the ethics and importance of participation (energy justice and democracy), and practically, through engagement with existing citizen led-projects and engaging with citizen-led activist movements.
 - Local Authorities need to **recognise that answers often lie within their communities**, and that citizens are *already* participating in energy systems, and contributing to the energy transition, in niche ways. A concerted effort to engage with existing projects is fundamentally important.
 - Local Authorities can **support citizen-led initiatives that already exist and encourage more uptake** through:
 - Procurement of locally generated renewable energy from community/cooperative energy projects.
 - Implementing a collaborative approach to delivering the energy transition by offering resources, officials’ time, guidance and a more united relationship between communities and Local Authorities.
 - Where community capacity and Local Authority capacity is low, cooperate on joint-ventures.
 - Local Authorities can **raise projects’ visibility and recognition** through raising awareness amongst their own members of staff and between departments of the benefits of citizen participation in the energy transition. Local Authorities can also use their established relationship with local and national media, to highlight the initiatives that occur within their region. Normalising such projects and identifying citizen-led initiatives as key players in the energy transition could lead to their replication.
 - **A focus on justice can be a central guiding philosophy for the energy transition** (being mindful of justice in both local and global terms) and can contribute towards a transition which is inclusive and fair. Citizen participation approaches should therefore **seek out the underrepresented** – and be inclusive of age, gender, race, minorities and geography.
 - **Community or citizen ownership of energy initiatives** developed by Local Authorities means citizens are better able to engage with energy systems. Ownership can involve: financial stakes in community energy initiatives/projects and remunicipalisation

movements and the co-design (and a sense of co-ownership) of energy visions and projects through deliberative processes.

- For an active and engaged citizenship, an active and engaged Local Authority is also needed. **All members of staff within Local Authorities need to be literate around the challenges that the energy transition will entail**, and the need for the transition to be just through adopting a collaborative approach.
- There is need for much more **cross-departmental collaboration** within Local Authorities, including an understanding of energy transition matters going beyond being an 'environmental' issue alone.
- **Engaging with the many forms of participation** - including citizen activism, protest and campaigns which reflect the concerns of citizens - is key to nurturing the relationship between local governments and the public, fostering **trust** between both parties and encouraging a more deliberative relationship between both.
- Following from this, **Local Authorities need to be more approachable** - adopting an open-door policy and allowing citizens to be able to engage with developments much more easily. This can be done through actively seeking out existing initiatives and

movements and inviting more citizens to shape policies.

- Adopt **participative governance strategies that allow for the input of citizens** into all-city and/or all-region vision strategies. Although there are some examples of good practice, it is certainly not yet the norm.
- Local Authorities have a specific role to play in ensuring that their citizens' views and hopes are fed into the **National Energy and Climate Plans** that will be prepared for by the end of 2019 by all EU member states. Failing this, there is a role to play in raising awareness of these plans, ensuring that citizens can engage with them and contribute to achieving, and surpassing the goals set out for each nation state.
- **Ideas developed through creative processes could lead to a wider participative audience.** Not all citizens will be eager to be part of a local energy strategy if delivered in a traditional, structural way - but they may be if paired with a wider vision of social development, mobility, local wealth and health, culture and art.
- Further **in-depth analysis and longitudinal research** is needed to test the participatory advancements of local governments in the energy transition.

Contents

Executive Summary	3
Contents	5
1. Introduction	6
2. Background Context.....	8
2.1. Policy context: Including citizens in energy systems.....	8
2.2. How citizens have been viewed in energy systems.....	9
3. The importance of citizen engagement and participation	10
3.1. Potential benefits of citizen engagement	10
3.2. Key concepts in the ethics of citizen participation.....	10
3.3. Diverse approaches of participating	13
4. Active governance for aiding participation	16
4.1. Practical Local Authority support for existing activities (Community/Cooperative/Citizen-led initiatives).....	16
4.2. Supporting wider participation: Deliberative democracy.....	18
5. Conclusions and Recommendations	21
6. Resources: EU initiatives, funding and research.....	23
7. Acknowledgements	25
8. References.....	26

1. Introduction

“For too long, the dominant conversation on climate change has included only a tiny range of people, namely a handful of policy-makers and valuable scientific sources. This selectivity sidelines the contributions of popular, personal, local and indigenous knowledges, which will be vital if we are to attain any plausible climate safety. To tackle arguably the deepest problem we have ever faced, we are going to need to pull together our collective wisdom, in its plurality of lenses and expressions.”

The Memory We Could Be,
Daniel MacMillen Voskoboynik (2018, p.18)

In the field of sustainable energy (e.g. renewable energy production, energy savings, investment in local energy transition projects, etc.) as well as in the broader field of citizens’ concern for better and more sustainable quality of life (new modes of housing, mobility, lifestyles, sustainable food systems and communal wellbeing etc.), collaboration between citizen initiatives and Local Authorities plays a vital role. To succeed in reaching the goals of an energy transition, moving away from carbon emitting energy resources to renewables, everyone needs to participate in its implementation. For everyone to participate, engagement practices are key, and Local Authorities, being the closest body of government to people, are strategically important. Without gaining the support and engagement of an approving populace, the energy transition will be a slow and protracted movement.

Whilst there are many examples of Local Authorities working with their citizens successfully, some of which are included in this report, there are also a number of examples where Local Authorities have not been as successful in this regard. There are frustrations in these relationships¹, despite good intentions and a desire to be inclusive of their citizens. Engaging with citizens (be it through supporting citizen-led initiatives and replicating them or engaging with more disaffected groups on energy matters) following centuries of top-down governance models is a complex challenge. An embedded practice of ‘top-down’ governance in energy systems (Warren and McFadyen, 2010; Komendantova et al, 2018), has made little or no use of citizen involvement or participation in the past. However, it is increasingly accepted that technological developments alone are not sufficient in addressing and delivering a more sustainable energy system. The transition is also faced with a number of major social challenges. These challenges include awareness-raising, creating more effective (and people centred) policies, creating supportive economic systems

1 Interviews with community based practitioners as part of this secondment raised issues such as the lack of a collaborative approach to delivering low or zero carbon initiatives, a lack of urgency and lack of holistic approaches between governmental departments of Local Authorities.

that are also ecologically sympathetic, ensuring a just and fair transition and encouraging engagement and positive behaviour of energy users (Sovacool, 2016).

Despite this, when turning to the research base which informs energy systems change, the mechanisms to aid the energy transition continue to be seen in mainly technological terms, i.e. which technology and technological focused policies can aid a society’s transition to a low carbon existence. Much less regard has been given to the societal nature of such a transition (Sovacool, 2014) that is, the human aspect, including the role of citizens in transitioning to a new low carbon system. This is despite growing acknowledgement that the transition is not only about changing technologies, but also about changing society. It is widely recognised that research from Science, Technology, Engineering, and Mathematics (STEM) disciplines have dominated discussions and the development of energy policy (see Foulds and Robison, 2018). In contrast, Social Sciences and Humanities (SSH) disciplines, as diverse as e.g. cultural studies, history, psychology, sociology and ethics, and their approach to energy-related issues, tend to be neglected in comparison to more traditional technologically driven research (Foulds and Christensen, 2016).

This report is therefore an opportunity to engage with SSH research, to consider why citizen involvement in energy systems is necessary in the energy transition, how citizens have been involved in the past, the diverse ways in which citizens do participate, and to understand the role Local Authorities can take in upscaling participation. By adopting the SSH angle, thereby acknowledging the social nature of the energy transition, and through reviewing a number of new governance models within Local Authorities, the report contributes new knowledge that paves a path for the genuine involvement of citizens in a just and citizen-led energy transition.

This report is part of the wider Energy-PIECES (Energy Policy Insights from Early Career Events and Secondments) project² which has, in response to the above and connected to the linked SHAPE ENERGY project³, sought to directly engage SSH perspectives on a set of specific energy policy ‘problems’. The report has been developed through a secondment period with Energy Cities⁴ – the European Association of Local Authorities in energy transition. Their aims are three-fold: (1) strengthening Local Authorities’ skills in the field of sustainable energy, (2) influencing European policy on behalf of Local Authorities and (3) creating networking opportunities

2 Funded by the UKERC networking fund and co-ordinated by Anglia Ruskin University’s Global Sustainability Institute (GSI) alongside the University of Cambridge’s Centre for Science and Policy (CSaP), see <https://www.anglia.ac.uk/global-sustainability-institute-gsi/research/consumption-and-change/energy-pieces>

3 See more about this 2 year EU project via <https://shapeenergy.eu/>

4 <http://www.energy-cities.eu/>

to share good practice of energy transition procedures. Energy Cities set the topic of the secondment, having recognised first hand that the relationship between Local Authorities and citizens on energy systems and within the energy transition can be challenging. This is partly due to a lack of tools and know-how amongst Local Authorities that can enable them to engage properly with local actors. These challenges are further compounded with lack of resources and widespread cuts to public spending across Europe (see e.g. REScoop, 2018). Also, there have been cases where Local Authorities are seen to have worked against community and citizen-led initiatives, causing lack of trust and despondency⁵. There are also frustrations with the means that national policies are developed – processes that do not enable publics to contribute their visions.

It is becoming clear however, that Local Authorities need to engage widely on energy system matters, since there is limited scope as to what they can achieve alone. Local Authorities are in control of only a fraction of greenhouse gas emissions – collaboration with other stakeholders is crucial to achieve bigger impacts (Energy Cities, 2016). Knowing more about how people engage with energy systems, and how they want to and can be involved, can hopefully assist those in local government to implement the very best governance strategy to ensure the engagement and participation of their citizens. SSH literature can help in this aim, in part by identifying the different ways in which participation can occur, what Chilvers et al. (2018) refer to as ‘ecologies of participation’.

This report is informed by energy-SSH academic literature along with ‘grey’ literature (reports, policy documents, strategy papers etc.), as well as several

conversations with individuals working in the community energy sector, with Local Authorities and/or in the field of citizen participation in energy-related issues. A Masterclass organised by Anglia Ruskin University in Cambridge in December 2018 (as part of the Energy-PIECES project) further informed the report, particularly through attention given to the role of deliberative democracy in the energy transition movement. Material collated within this report is intended to better inform Energy Cities and its partners, Local Authorities and Municipalities, civil society groups and others interested in how citizens can be supported and encouraged to participate in energy system developments as a part of the energy transition. The findings in this report are therefore intended to directly help Local Authorities across Europe in implementing more participative approaches to their governance practices in energy systems.

The report is structured in the following way. It firstly presents the background context to citizen participation (Section 2), before exploring current debates in the energy-SSH literature (Section 3), and then giving examples of how Local Authorities can encourage the participation of citizens in energy systems and the wider conversation on the energy transition, through policy and practice (Section 4). Throughout the report, examples of projects that aim to encourage citizen participation are mentioned (with further links to each example). The report ends with conclusions and recommendations. There is also an annotated list of current programmes and projects which provides Local Authorities with further information on how to encourage more citizen engagement with energy systems and finally a reference list.

.....
 5 Interviews with community based practitioners as a part of this secondment highlighted cases where Local Authorities seemed to have worked against citizen-led initiatives, or had shown little active interest or support.

2. Background Context

2.1. Policy context: Including citizens in energy systems

Following the most recent Intergovernmental Panel on Climate Change (IPCC) conference in Katowice, Poland in December 2018, there has been a renewed sense of global urgency to act on climate change. Climate scientists have urged the need to adhere to the Paris Agreement of 2015, to limit average global warming to under 2 degrees. They have now estimated that there is only a matter of eleven years to act to avoid global heating of 1.5 degrees. That would mean carbon emissions being radically curtailed, and systems put in place that ensure a sustainable carbon-free society. This entails a complete transformation of how society has existed since the Industrial Revolution of the 19th century. The window of opportunity to implement such changes is small, and the magnitude of the change needed is staggering, particularly since this system transformation overarches several different sectors, including energy, transport, food, manufacturing and trade.

The IPCC's emphasis on the short time-limit for serious action seems to have influenced political will and policy development in paving the transition path and have led the way for more urgent policy goals at a European level. The most recent of the EU's Renewable Energy Directives⁶ builds upon almost thirty years of European policy on climate action. What is novel about the new directive, however, is its recognition of the need for more haste in implementing renewables, and the need to adopt a more inclusive approach to delivering the set targets for 2030 and 2050. The directive has also included the 'Clean Energy for all Europeans' package. This package strengthens the rights of EU citizens and renewable energy communities, and is seen as enabling them to "produce, store, consume and sell renewable energy without being subject to disproportionate burden and discriminatory procedures" (Energy Cities, 2019, p.7) and are able to "invest in renewables and benefit from the energy transition" (Friends of the Earth Europe, 2018, p.10). It recognises that citizens have the potential to play a pivotal and active role in the energy transition. However, the Clean Energy package continues to view energy as a commodity, rather than a right – a continuation of a

6 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018L2001>

neoliberal approach to the energy system as a whole⁷. This is an attitude that is being contested by a number of European groups interested in Energy Democracy – who aim to place rights, rather than financial gain, at the centre of the energy transition.⁸

The policy ambitions at EU level have, in turn, influenced the goals of member states, although the emphasis on citizen participation in the energy transition varies. Subsidy for citizen-led renewables have come (and gone in the case of Spain and the UK) and the objectives and targets of governments can widely vary which is "often a question of national context as shaped by different cultures and histories" (Lipp, 2007, p.5481). Some nations have clearly focused on creating native, locally or community owned energy projects. This has been done through creating set targets, such as to generate a gigawatt of community and locally owned energy in Scotland by 2020 (Scottish Government, 2019) and a gigawatt in Wales by 2030 (Buckland-Jones, 2019). Cooperative energy is prolific in Denmark, Germany and the Netherlands (REScoop, 2018) while other nations pursue more traditional, centrist models as a means of decarbonising, such as the contested nuclear energy approach in France. The Energiewende in Germany⁹, has commonly been seen as a leading example of how the energy transition could be done (with consideration to the social dimensions) and has captured the imagination of proponents of a new, cleaner, more just energy system. However, there are also lags in the energy transition, with less project development and fewer cooperative approaches, in central and eastern Europe (REScoop, 2018). It will be a matter of time as to how the EU's Clean Energy package will be interpreted in national policy, with all member states preparing National Energy Climate Plans as a part of the Renewable Energy Directive by the end of 2019.

At a more local level, Local Authorities' role in the energy transition and working with their citizens in doing so, has been recognised as crucial to paving transition paths. The foundation of Energy Cities as an environmental association (along with Climate Alliance and ICLEI: Local Governments for Sustainability) in the 1990s, was based on the recognition that Local Authorities are a crucial actor in delivering the energy transition¹⁰. This was further recognised by the European Commission's

7 Interview with energy democracy practitioner.

8 See Energy Democracy: <http://www.energy-democracy.net/>

9 See The Global Energiewende <https://energytransition.org/>

10 Following the very first report by the IPCC in 1990 (Emelianoff, 2014), and the 'think global, act local' concept that soon followed.

launch in 2008 of The Covenant of Mayors¹¹ which is now a network of some 7,000 local and regional authorities from across the globe, offering guidance on delivering sustainable and climate action plans. Currently, in policy terms, a particularly crucial role for Local Authorities is to engage and participate in the creation of the aforementioned National Energy Climate Plans¹². They also have the potential to encourage citizens in their authority region to participate in the co-construction of these plans, and directly benefit from the “core set of enforceable rights” (Friends of the Earth Europe, 2018, p.11) that are enshrined within the EU’s new Renewable Energy Directive.

2.2. How citizens have been viewed in energy systems

Although there is now greater acknowledgement of the need for widespread engagement and proactive participation of citizens in energy systems in contemporary EU policies¹³ (as a means of fast-tracking and upscaling the energy transition across Europe), up until now ‘publics’¹⁴ have tended to be viewed in a regressive way. Citizens have often been seen by politicians and portrayed by the media as passive consumers, rather than active and practically involved ‘energy citizens’, with a concern for energy issues and developments (Sarrica et al, 2014). According to some energy-SSH literature, this perception is derived from historical practices and norms, as described next. Energy generation models of the past have not relied on the active participation of citizens, having mostly been owned and managed by private enterprises for private financial gains. Energy infrastructure has also been centralised, a behemoth owned and managed at national level (be it under national or private ownership). This historic centralised and privatized energy system has resulted in “a psychological distance between people and energy generation” (Warren and McFadyen, 2010, p.205). This psychological distance has caused multiple obstacles for the development of a diverse, distributed renewable energy sector, since societies have become accustomed to the distant and passive relationship between them and their energy source.

Also, the energy sector has cultivated a ‘deep incumbency’ (Johnstone et al, 2011) where there has been a lock-in relationship between governments and large corporations. Within such a system a different regime, one which is more inclusive of citizens, becomes difficult to envisage (Brisbois, 2019). Compounded with this, the passive, unconscious consumption of energy by industrialised/developed countries (Kellet, 2007; Rogers et al, 2012) also stands as a psychological barrier towards nurturing a sustainable, low carbon energy system and society, which is more considerate of how energy is produced and how it is used.

In the past, publics have also often been portrayed as a general threat to renewable energy deployment (e.g. NIMBYism¹⁵), as a problem to be solved (behavioural change of energy consumption), as passive consumers (as opposed to ‘prosumers’¹⁶), and to be ‘consulted with’ (through outmoded public opinion surveys and consultations) rather than being the ‘leaders of. The numerous ‘threats’ posed by the public exist within a landscape where energy projects are also planned centrally (Galvin, 2018) rather than deliberated amongst a wider, distributed public. Energy infrastructure and projects tend to have been developed away from the public eye (Newell and Mulvaney, 2013) or through disingenuous engagement practices and consultations. Also, publics tend to be seen only in the paradigm of the local, i.e. with parochial interest purely in local energy matters, rather than an interest in national or global ideas. Finally, publics tend to be seen as “recipients of benefits rather than active citizens” by energy developers (see Cowell and Devine-Wright, 2018, p.504) – meaning that in economic terms, they are merely to be handed financial ‘sweeteners’ rather than being at the centre of developing and gaining financial returns from energy developments. These ingrained assumptions made about citizens and their role in energy-based developments have, at most, been cynical, and solely based on acceptance or non-acceptance of energy technology.

However, energy-SSH literature has been moving away from such narratives. As Müller et al, 2011, p.5801 propose: “We need concepts that go beyond acceptance of technologies and innovations...and enable local actors to actively participate in the transformation of the energy system and pursue their interests and contribute to the good of their society”. So, engagement with ‘energy systems’, should not only consider acceptance of new technologies, but how the energy transition can contribute towards a common good.

11 See more here: <https://www.covenantofmayors.eu/en/>

12 Interview with citizen energy lawyer.

13 <https://www.clientearth.org/public-participation-part-eu-climate-governance-regulation-help-transition-cleaner-efficient-energy-future/>

14 Groups of individual people.

15 Not In My Back Yard (NIMBY) - a term coined to describe citizens who refuse energy infrastructure based on visual impact. It is however important to note that not all examples of citizens non-acceptance of certain energy infrastructure are solely based on visual impact. See Wolsink (2007) and Devine-Wright (2009).

16 Producer and consumer, rather than solely the latter.

3. The importance of citizen engagement and participation

This section engages with energy-SSH literature that aims to clarify the importance of citizen participation in the energy transition. Section 3.1 poses the benefits of citizen participation; Section 3.2 introduces the key ethical concepts of participation and Section 3.3 explores examples of citizen participation. Further information and examples are also given of engagement and participation practices next to the ‘eye’ symbols in the following pages. There is an increasing interest from practitioners, but also policy developers and energy-related researchers, in citizens’ opinions, beliefs and engagement with energy system transitions (Chilvers et al, 2018) and their active participation in local policy processes in such transitions. Understanding the social concepts of involvement in the energy transition can lead to a more considered approach to participation and help guide practical solutions. This section also includes references to initial readings of key academic resources of relevance (see references and reference list at the end of the report).

3.1. Potential benefits of citizen engagement

A number of benefits (and conversely, limitations) to citizen participation in energy systems have been explored by SSH researchers. These are briefly reviewed here:

- **Speed.** There is a growing consensus that for the energy transition to occur at a faster rate, citizens’ involvement and active participation is imperative (Sovacool, 2016).
- **Inclusivity and fairness.** As there is a need for technology to change, so too is there a need for the procedural and ownership models to change (Jenkins et al, 2018).
- **Addressing interlinked social issues.** Engagement and participation allow communities to shape the energy transition in a way that best suits citizen’s needs, goals and aspirations (Murphy and Smith, 2013) and which have the multiple roles of addressing

fuel poverty, health, wellbeing and other social issues (Kellet, 2007).

- **More democratic.** Citizen participation in the energy transition embodies the difference between something being imposed upon a community and something being chosen by the community to pursue themselves (Willis and Willis, 2012). Ensuring that citizens are at the centre of the energy transition and are active participants and leaders of the transition is not only practically important but has ethical merits (see Section 3.2).
- **Collaboration.** A more collaborative approach between Local Authorities / municipalities and external actors, such as citizens, is also an effective and practical means of achieving energy transition objectives (Eckersley, 2018).
- **Raise public awareness.** Citizen participation can lead to raising public awareness of a particular matter, including raising awareness of the (collective) need for action. Through participation, a more varied, informed and knowledge-based consensus can be reached (Elelman and Feldman, 2018).

3.2. Key concepts in the ethics of citizen participation

Citizen participation in energy systems, within energy-SSH research, is increasingly referred to in terms of ethics – with an abundance of research proposing the need for social justice to be enshrined in the energy transition movement. Too often and for too long, it is proposed, energy decisions have been made in a “moral vacuum” (Jenkins et al, 2018, p.71). Although renewables offer a solution to low carbon futures, they do not on their own ensure community justice and an ethical transition. The five concepts discussed next have been chosen due to their proliferation in energy-SSH literature.

Energy Democracy centres on the notion that energy policy and energy transitions should be developed under democratic practices – whereby people, or citizens are central in creating a ‘common good’. It is also focused on the need for the “decommodification of energy systems, aspiring to make energy a common good and democratically owned” (Thombs, 2019, p.160) with energy seen as a human right¹⁷. This breaks with what has been a neo-liberal approach to the energy system of the past, that has commodified energy and placed financial gain at the centre of the energy sector. Furthermore, whereas a democratic approach to energy development, inclusive of public opinion, was deemed unnecessary in the past (see Szulecki, 2018), it is increasingly recognised that this can no longer be the case. With the democratisation of energy systems, and the active input of a more participative public, energy policies of the future could be more attentive to community concerns such as local economic, social and civic benefits (Brisbois, 2019; Voskoboynik, 2019; Thombs, 2019). Energy Democracy not only relates to ‘local’ projects either. It is argued that citizen input and collaboration need to happen at national level in order for Energy Democracy to be truly realised (Elelman and Feldman, 2018). The concept of Energy Democracy appears to have three main tenets – that energy systems need to be **fairer** (including a collective of citizens who have some control over energy resources), that decision making should be **devolved to local actors**, and that **cooperation between different societal actors** needs to take place (van Veelen and van der Horst, 2018). There is also a political argument made for Energy Democracy – that more local participation and control of energy resources and developments can also lead to wider political aspirations (Kunze and Becker, 2014).



The IMAGINE initiative, coordinated by Energy Cities¹⁸, was a networking project, involving numerous practitioners within Local Authorities right across Europe which explored the notion of encouraging the input of **all** stakeholders within a city (or town, village, region), as a necessity in order for regions to become genuinely energy sustainable and practice **Energy Democracy**. The project demonstrates a number of participatory methods, where local decision making becomes a more social rather than political practice (Elelman and Felfman, 2018). See more here: <https://energy-cities.eu/project/ imagine/>

Energy Justice is a key concept found in energy-SSH literature. The notion of justice has been used by environmental justice activists and practitioners in the past, but only in the past decade or so analysed and theorised in scholarly research in relation to energy systems (McCauley et al, 2019). It is a concept that addresses the integrity of the energy sector, and the relationship between those who benefit and lose within the system (Bickerstaff et al, 2013). The concept considers justice issues within the energy system from a number of different angles – issues including how costs and benefits

are distributed, the positioning of infrastructural developments, who’s affected (not only now, but future generations), who gains and who is involved or excluded (Bickerstaff, 2013; Walker et al, 2010; Jenkins et al, 2018). The term tends to be discussed through its sub-themes; procedural, distributional, recognition, cosmopolitan and restorative justices (see McCauley et al, 2018, for further analysis). In brief, **Procedural Justice** views the process and mechanisms used to develop energy policy and visions, with a consideration of who is included/excluded within that process. **Distributional Justice** considers where developments are sited (whether they are just or unjust), who has access to energy and how benefits to developments are distributed. **Recognition Justice** considers who is included and who is neglected from the decisions made around energy systems and sectors. **Cosmopolitan Justice** advocates that the principals of Energy Justice are applied to people of all nations, and that there is a global responsibility in energy transitions. This includes the impact that energy choices have on those beyond the immediate location of a project (for example, the way energy decisions in the Global North can affect societies in the Global South). **Restorative Justice** aims to restore and recompense the injustice that has occurred through energy developments of the past (see Heffron and McCauley, 2017). As Jenkins et al (2018) point out there is a danger in ignoring these justice issues within the energy system. Dangers could include intensifying poverty and non-participation of certain groups of people. They also argue that an energy transition without a notion of justice, might lead to other associated risks such as waste, over-consumption and pollution by those that have too much energy, and under-consumption, poverty and health issues to those that have too little energy (see also Sovacool et al, 2016).

Matters to do with justice have however been somewhat side-lined within the energy sector (Murphy and Smith, 2013) and particularly within the energy transition to renewable, low carbon energy systems (Eames and Hunt, 2013). The concept of Energy Justice needs to be ingrained within political discourses for it to have any real traction, and it has become in the eyes of many researchers a ‘political struggle’ (see Healy and Barry, 2017, and Jenkins et al, 2018). It is suggested that there is a need for mechanisms to be put in place to ensure Energy Justice, procedures that limit excess influence of political and energy industry incumbents (Lawhon and Murphy, 2011), and a targeted effort to support communities and householders (Jefferson, 2008 in Jenkins et al, 2018). Jenkins et al (2018) also refer to “an energy justice checklist” (p.68) for energy decision makers – developed by Sovacool and Dworkin (2014) and Sidortsov and Sovacool (2015) -which include sociopolitical, geographic and technological considerations. These works include a series of ‘key questions’ to be considered in able to ensure Energy Justice, such as: the transparency of energy revenues, who has control over energy infrastructure, if the adoption of one technology impedes the development of other (possibly more efficient, low-carbon) technologies, is climate change a risk that is considered when developing new energy infrastructure, are low-income citizens disproportionately affected by large scale energy developments, are governments and energy developers mindful of human rights abuses that can occur within the energy sector etc. (see Sidortsov and Sovacool, 2015

17 See Energy Democracy here: <http://www.energy-democracy.net/>

18 IMAGINE initiative: http://www.energy-cities.eu/IMG/pdf/IMAGINE_Memorandum_en.pdf

and also Sovacool et al, 2014). The further development of these questions could be a useful resource for those working in governance roles on energy developments.

Bürgerenergie | Citizen Energy or Energy Citizenship is a concept based on projects that involve democratically run bodies and which practice and encourage collaboration between citizens, civil society and Local Authorities (Rommel et al, 2018). It is both about citizen awareness of the personal responsibility relating to climate change and the necessity of an energy transition, but also about taking practical action upon this awareness, e.g. through changing consumption patterns, supporting community renewable energy projects or contributing to a strong civil society that collaborate towards achieving a low carbon society. Citizen Energy embodies the ideal of an active and participative public cooperating with other 'local' bodies. Energy Citizenship and a community's involvement in energy projects encourages both reaching consensus through collaboration and social responsibility (Walker and Devine-Wright, 2008). Such a collaborative model was used in Samsø, Denmark, where a diverse group representing the local community participated in a workshop that intended to draw up a plan for a low cost, carbon neutral energy system for the island (Möller et al, 2012). Through this collaborative approach to problem solving, a catalytic effect was also observed - participants had a better understanding of wider sustainability issues, and their support for renewables on the island was solidified. It has been shown that through participating in similar community focused energy projects, citizens can become more engaged with climate change and energy issues (Willis and Willis, 2012). Involving citizens in the development and decision-making processes has an educative role - allowing participants to learn and consider a number of linked issues. This example supports the notion that 'bottom-up' projects that encourage Energy Citizenship can have a range of benefits, benefits that might not occur in 'top-down', commercial or corporate projects (Toke, 2005). A lack of active Energy Citizenship (and moreover, a strong civil society) who are willing and able to address the current energy dilemma, can mean that incumbent energy policies and industries remain unchallenged (Strachan et al, 2015).

 **Innovative Low-Carbon Public Services project** (Ii, Finland). A collaborative approach to designing the future of low carbon transport and public services for the town of Ii in Finland is an example of how **Energy Citizenship** can look. "Citizens of all ages were involved in the project, not only in order to discuss things to be improved but also in elaborating a shared strategy together with their policy makers. This created a strong feeling of ownership, making Ii's inhabitants proud of their city and avoided public resistance to the project" (Renewables Networking Platform, 2019, p.2).

Energy Autarky is another concept within energy-SSH literature. Energy Autarky is defined as "local action towards the development of a region's viability, based on the transformation of the energy subsystem" (Müller et al, 2011, p.5801). 'Autarkes', from the Greek meaning economic independence and self-sufficiency differs from the term autonomy which describes a place's freedom from

outside control, power or influence (Müller et al, 2011). Implementing Energy Autarky means that regions would develop the capacity to rely on their own native resources for energy services, rather than rely on energy imports. This is breaking with the traditional nature of the current energy system, where we tend to trade within energy markets without much regard to regional boundaries. In the case of Energy Autarky, huge energy infrastructure which have been used to source the energy needs of 'developed' nations (Johns, 2015) would no longer be needed. Energy Autarky encourages a focus on regional answers to energy needs - a permaculture¹⁹ ethos to energy systems.

 **Lochem Energie** (Netherlands), is an initiative of the citizens of Lochem who aim for all of their energy to be produced, by citizens and companies, within their own municipality by 2030. This is an example of **Energy Autarky** - where there is a clear aim to achieve energy independence, without reliance on energy imports, within the geographic area of their municipality. See more here: <https://www.lochemenergie.net/je-eigen-energie>

Addressing unequal participation

"It seems reasonable to suppose that a 'low-carbon' transition has the potential to distribute its costs and benefits just as unequally as past transitions without governance mindful of distributional justice."

(Eames and Hunt, 2013, p.58)

A recurring matter raised within energy-SSH literature and the ethics of the energy transition is one of caution - that of unequal participation. Already, research has shown that relying too heavily on policy or expert knowledge in the energy transition has led to social inequalities (Christen and Hamman, 2014). A more democratic and participative approach to the energy transition implies that a collective of people work for a 'common good' (see van Veelen and van der Horst, 2018, also Walker et al, 2015). However, who is involved, or not involved in constructing the idea of a common good (as Energy Justice scholars discuss), can lead to inequality.

It is therefore important to consider who has taken part in energy developments of the past, and who has been left out, and how this can change in future. There is some energy-SSH literature that speaks about unequal participation in regard to energy systems, based on gender, race, class and culture. For example, in a review of the "Transition Towns" movement, participants tended to be white, middle class, highly educated and not a part of a religious community (Grossman and Creamer, 2016; Aiken, 2012). Grossman and Creamer label the movement as 'passively inclusive', that is, being open to all but lacking an active attempt to be inclusive of underrepresented members of their communities. A similar trend can be seen in some examples of the renewables sector, where there has been noted a gender, class, age and education imbalance (Fraune, 2015). Fraune also notes that in her

19 Agricultural ecosystems that are developed to be sustainable and self-sufficient and self-supporting.

German case studies²⁰, personal assets, i.e. money – and an individual’s access or lack of access to finance, is the most influential factor for participating in community-driven renewable electricity projects.

 **GoiEner Cooperative** (The Basque Country) has followed a participative model to engage with citizens and have made added efforts, in particular relation to gender equality, by ensuring that there is equal representation of genders in all of their projects. Here is an intentional effort to recognise the inequalities involved in energy participation, and a determination to resolve this inequality. See more here: <http://www.energy-democracy.net/?p=1190>

There are also examples of unequal participation based on ingrained historical and cultural inequalities. Inequality has arisen from the colonialism and history of dispossession experienced by Indigenous and First Nation peoples across the globe. Natural resource use for energy purposes have excluded issues of indigenous rights in a number of countries. However, there are now various projects amongst First Nation communities that encourage an active participatory role in the development of locally owned and developed renewable energy projects (Henderson, 2013). These experiences could also be exemplars for other sectors of societies across the globe that have been similarly ‘locked-out’ of past energy systems.

 **20/20 Catalysts Programme** (Canada) is a project that aims to multiply community energy projects in Canada by working collaboratively with Indigenous leaders and clean energy practitioners. It is a means of ensuring that Indigenous communities are a part of and can benefit from the energy transition. See more here: <https://indigenouscleanenergy.com/2020-catalysts-program/>

3.3. Diverse approaches of participating

Citizens can participate in energy systems and the energy transition in numerous ways, what Chilvers et al (2018) call ‘ecologies of participation’. However, in the past, citizen participation in energy systems has often been fixed on ‘old’ ideas of what it means to contribute to developments in the public sphere (Chilvers and Longhurst, 2016). Participation has thus mainly been practised through citizens being involved via top-down participatory models including consultations and surveys. These processes are rigid, unimaginative and have tended to view publics as consumers or a threat to renewable deployment (Chilvers et al, 2018), and a

²⁰ Research included 38 citizen associations managing wind power plants and 33 citizen associations managing solar power plants in South Westphalia, Germany.

group disinterested in wider strategic issues (Cowell and Devine-Wright, 2018). These models do not align themselves well with how energy-SSH literature has described the ethical importance of participation.

Apart from top-down attempts to engage with publics, there have been a number of ways in which citizens have participated bottom-up. Many of these activities have been niche and grassroots movements (Seyfang et al, 2013). Below are the three main, citizen-led types of participation within the energy sector: Community and Cooperative Energy Projects, Public Activism and Campaigning, and Local Authority and Citizen Collaborations. **Knowing how to encourage and multiply such activities should be a key consideration for Local Authorities. Suggestions on how to do so are developed in Section 4.**

Community Energy and Cooperative Energy Projects are renewable energy or energy related projects, owned and run by, and for the benefit of, a community of place or interest. These projects vary from schemes focused on electricity generation, district heat networks, electric car projects, and energy efficiency projects. Models include cooperatives, trusts, charities and joint-ventures with Local Authorities. Community ownership of renewable energy projects can offer an enabling role for communities and local actors to become active participants in the energy system transition. Some research suggests that there are unforeseen benefits to community owned and run projects, including community cohesiveness, higher financial returns (if the project sells energy as a commodity), a sense of empowerment and autonomy, and an increased sense of understanding wider sustainability issues (Walker and Devine-Wright, 2008; Warren and McFadyen, 2010). Citizen-led initiatives are also considered to be more ideologically based on social need rather than pure financial gain (Seyfang and Smith, 2007; Willis and Willis, 2012). They appear to be more inclusive of citizen and community members ideas and opinions during project development, while also engaging these members in the wider areas of energy generation, delivery and use (St Denis and Parker, 2009). They can also engage citizens in wider debates on the energy transition (Blanchet, 2015). There are however downsides to the sector. Not all aspects of community energy are guaranteed to be cohesive and affable. Community members might not share the same vision or ideal in project development. Also, administrative burdens are a barrier for communities, as the work involved in finding different funding streams and project support without much guidance or assistance can be onerous (Hain et al, 2005, Rogers et al, 2008, Yadoo et al, 2011). A community needs particular skills in order to face such burdens. They also operate in what continues to be a ‘corporate energy world’ (Strachan et al, 2015) dominated by large energy companies, and within policy developments in the EU that, despite recent developments, continues to be heavily lobbied by energy incumbents (Ydersbond, 2016).

 **A typology of the community energy sector** is included in a paper by Seyfang, Park and Smith (2012, p.7) which describes key examples from the sector as follows: “A wide variety of different types of community groups are involved with community energy, including local civil

society groups focusing on climate change, low carbon activities and general sustainability issues, e.g. Transition Towns; renewable energy cooperatives, community interest companies and partnerships; related non-energy groups e.g. local conservation or allotment groups; local branches of national campaigns e.g. 10:10; groups or organisations who own or manage (or build) community buildings, such as church or faith groups, schools and colleges, village halls, social clubs, social housing; Statutory and non-statutory councils below the district level e.g. parish or town councils; Community Development Trusts and Community Associations; projects set up by Local Authorities but mainly run by local communities e.g. Local Agenda 21 groups; and partnerships with public organisations with relatively strong community leadership.”

The varied nature of citizen-led and community projects, as described by Seyfang et al (2012) above, which span issues such as transport, conservation projects, obligation for future generations, policy development, wellbeing, equity and sustainable visions for the future (see Chilvers et al, 2018) also suggests that by its very nature, the community and cooperative energy sector has a potentially wider ‘net’ (compared to traditional top-down energy projects) in being able to engage with a diversity of citizens. This description suggests that the sector engages with a more diverse range of citizens; although as Creamer et al (2018), Grossman and Creamer (2016) and Energy Justice and Energy Democracy literature point out, injustices can still occur, and people can still be excluded.

A recent study of UK based community energy projects showed that half of the groups surveyed were planning to develop further sustainable energy projects (Seyfang et al, 2013), a finding which is particularly noteworthy for policy makers interested in upscaling renewables and directing society at large towards low carbon practices. As Kunze and Becker (2014) point out, measures that bridge the relationship between the energy transition and sufficiency and post-growth (which are strongly linked to community energy activities) would mean that goals to reach 100% renewables could be more easily met (see also Greenpeace, 2015). Evidence also shows that working as a part of, and on behalf of a community, leads to greater public trust in renewables. The communal approach to the process of development generates trust from the bottom up (Walker et al, 2010; Rogers et al, 2012; Blanchet, 2015). Losing such models of local ownership can lead to a decline in social acceptance (Sovacool, 2017). This is again, a valuable lesson for those wanting the diffusion of renewable technologies, and linked sustainability goals – community ownership leads to more acceptance, whilst also is a vehicle allowing communities to shape their energy futures.

 **For a sample list** of community and cooperative energy groups across Europe, see REScoop’s interactive map here: <https://www.rescoop.eu/community-energy-map>

Public activism and campaigns Another form of participation lies in campaigning and activist movements. Many campaign groups show a real grassroots concern

and desire for a faster energy transition. This is most recently portrayed in the global Extinction Rebellion²¹ movement which calls for governments to declare (and thereby recognise) the truth about the ‘ecological crisis’, to aim for zero carbon emissions by 2025 and to adopt participatory democracy – specifically a Citizens’ Assembly – as a means of allowing people to take part in initiatives of change. Another grassroots movement having much traction on a global scale is the recent ‘Strike for Climate’ actions – a global campaign inspired by 16-year-old activist Greta Thunburg, that has seen schoolchildren striking for more urgency to act on climate change. Civil participation in such forms of activism can lead to the shaping of policy, as has been seen in the anti-nuclear movement in Europe, particularly in Denmark and Germany, which helped shape a sustainable energy agenda in both countries (Toke et al, 2008). Also, it is suggested that through activism and focusing on and exposing injustices, unsustainable practices and failed democratic approaches of past energy systems, the energy transition can become more universally profound and relatable to citizens (Healy and Barry, 2017). Community energy and grassroots innovation projects seem to have also contributed to activist movements, contributing to making national debates, such as the Energiewende in Germany, more relatable at a local level in Berlin (Blanchet, 2015). It is proposed that campaigns also have the ability to simplify (or make more palatable) difficult answers to ‘wicked issues’²² (Voskoboynik, 2018). Participation of this type is proposed as being essential in pluralising and engaging with a more diverse audience on climate related topics.

 **The Divestment Campaign**, Friends of the Earth (UK). This campaign aims to simplify one aspect of the climate/energy transition movement by focusing on financial investments in carbon emitting companies. It is a campaign that seeks to help Local Authorities divest their pension funds from direct and indirect investments in fossil fuel companies. See more here: <https://friendsoftheearth.uk/climate-change/divestment>. Further information from Energy Cities on how Local Authorities can divest money and reinvest in local sustainable energy projects is available here: http://www.energy-cities.eu/IMG/pdf/climate-main-streaming_budgets.pdf

Local Authorities and citizen collaborations Local bodies of government have a commitment to the citizens of their place and locality and liaise most with their citizens and civil society actors (Creamer et al., 2018). Across Europe, there are examples of collaborations between Local Authorities, community groups and citizens on initiatives and participative practices. Within the community/cooperative energy sphere (discussed earlier), Local Authorities have initiated energy projects in Lochem, the Netherlands, and Saerbeck, Germany (Hoppe et al, 2015) and energy initiatives, such as Plymouth Energy

21 See more here: <https://xrebellion.org/>

22 Wicked Issues or Wicked Problems are terms used to describe issues that are imperfectly understood, and for which solutions are multifaceted and undecided – commonly used to describe the challenge of climate change.

Community in the UK (see Creamer et al, 2018). Plymouth Energy Community are a community benefit society (focused on energy efficiency, generation and supply) which was initially born from their city council in 2012. The group are located, on a service level agreement, in the offices of Plymouth city council, meaning that collaboration and relationships with local government staff is more direct – leading to a more collaborative approach to energy transition matters in the city²³.

 **Swansea Community Energy and Enterprise Scheme** (Wales), is a community-owned renewable energy company which was established by the City and County of Swansea Council, but now run independently by a group of local directors. They also have a member of the Local Authority on their board of directors which is reported to have a beneficial impact on moving projects forward – particularly those based on publicly owned buildings. The project, mainly based on installing solar panels on local schools, also intends to focus future efforts on new renewable projects, energy efficiency, low carbon transport, tariff switching, energy awareness, community spaces, enterprise development, business start-up costs, skills development, training and tutoring. See more here: <https://www.swanseacommunityenergy.org.uk/>

Apart from directly initiating or collaborating on energy projects, other Local Authority activities which have taken progressive steps to engage more with their citizens includes the co-production of energy roadmaps. These processes have seen a number of participative methods being used (Energy Cities, 2018), to include citizen opinions and desires in order to shape low or zero carbon futures for cities and municipalities. One of the binding requirements of the EU's new Renewable Directive (European Union, 2018) is the production of National Energy and Climate Plans (NECPs) for 2030 and 2050. There is potential room here also for Local Authorities, as representatives of their local citizens, to engage in this process – ensuring national policy landscapes that allow citizens to participate more effortlessly in the energy transition. These NECPs will be subject to a series of reviews. Any authorities that may have missed out on the opportunity to contribute with their citizens in developing these plans could have future opportunities to shape them.

 **Münster Roadmap for 2050** (Germany) included the input of approximately 1,200 local citizens through a number of participative steps. The process included visioning workshops for the wider public (an opportunity for citizens to imagine what Münster 2050 would 'look like') following a number of presentations by experts and researchers. Resulting ideas were then opened up to an even wider audience (through an online forum), and the public were encouraged to suggest projects that could deliver the roadmap's vision. The resulting

23 Interviews with community energy practitioners as a part of the secondment suggested that having closer contact with Local Authority staff or councillors led to more effective procedures in delivering community energy projects.

roadmap included 19 measures, which were co-created by 'traditional' experts and the input made by a wider participating public. By so doing, the roadmap was jointly owned, rather than a vision placed upon the city's inhabitants 'from above'.²⁴

Another type of cooperation between citizens and Local Authorities includes the remunicipalisation movement. Remunicipalisation entails the establishment of authority owned public energy/water supply companies²⁵. Energy services, traditionally having been provided by the private sector, are being absorbed back into the public sector through this movement. This is partly done as a means of controlling what has seemingly become, under private sector management of energy services, inflated energy prices and inefficiency (Energy Cities, 2017). Cases of Local Authority control of energy infrastructure in Austria, Sweden and the Netherlands are indicated as an important apparatus in achieving long-term and aspiring local sustainable energy goals (Hawkey, 2015). There also appears to be great appetite for more municipality-led energy companies, with citizens in Berlin for example, leading the call for remunicipalisation²⁶. Public management of energy services are also often framed in social justice terms – as seen in *Our Power* in Scotland, *Bristol Energy* and *Switched on London* (Energy Cities, 2017).

Remunicipalisation examples are wholly owned by Local Authorities, and there is increased interest in how these companies can have more citizen buy-in²⁷. Currently, Stadtwerke Wolfhagen in Germany appears to be the only municipally-owned energy company that currently has a level of citizen investment. Wolfhagen remunicipalised their local utility, previously operated by E.on in 2006 (Chakraborty, 2018) with the utility being 25% owned by citizens through a cooperative. This is a model that could be replicated as a means of encouraging a more collaborative relationship between Local Authorities and citizens. If remunicipalised energy companies choose not to have this level of buy-in through some level of local ownership, citizens are required, in essence, to remain passive consumers (albeit that their energy is locally sourced and managed). Nevertheless, it would seem that there is a growing appetite for more public ownership of energy services in the form of remunicipalised utilities (Energy Cities, 2017).

24 See more within Energy Cities publication 'Local Energy and Climate Roadmaps: 5 city visions for 2050' for examples of participatory measures in co-creating energy roadmaps: http://www.energy-cities.eu/IMG/pdf/local_energy_climate_roadmaps_final.pdf

25 See more examples of municipal energy companies in Energy Cities publication 'Local Energy Ownership in Europe: An Exploratory study of Local Public initiatives in France, Germany and the United Kingdom': http://www.energy-cities.eu/IMG/pdf/local_energy_ownership_study-energycities-en.pdf

26 Berliner Energietisch, Germany. A promising attempt to reclaim Berlin's energy supply <http://www.energy-democracy.net/?p=357>

27 Interview with community energy practitioner raised the issue of how to make the remunicipalisation movement more inclusive of citizens, allowing them to contribute ideas and have a sense of ownership.

4. Active governance for aiding participation

Having looked at the background and importance of citizen participation in energy systems and the energy transition, this section aims to focus more at the fundamentals of governance. How can Local Authorities improve their governance strategies in order to stimulate the participation of citizens in the energy transition? After outlining the challenges of ensuring citizen participation, subsection 4.1 first gives a number of current example strategies – including procurement of energy from citizen-led projects, joint-ventures, championing and raising awareness – before subsection 4.2 discusses processes which are more novel and consequently, to date, have not been used as widely.

Governance has both horizontal and vertical dimensions, i.e. across governmental departments and associated bodies, and up-down through different levels of administrations, from the national to the local. Within energy transition governance practices, there appear to be a number of identifiable problems that have so far impeded or frustrated citizen participation in the energy transition and the relationship between citizens and their Local Authorities around this agenda, as outlined below:

- **Challenges in coordinating for rapid action.** There is a temporal difference between what is said ‘at the top’ (e.g. positive language for the need for community and citizen participation in the energy transition) and what is acted upon by government bodies ‘below’ – i.e. at more localised levels²⁸. Despite recognition from all different tiers of government that there is a need to act now on reducing carbon emissions, there often appears to be a lack of a coordinated plan in how to do so (Eckersley, 2018), how to do so with efficiency and urgency, and furthermore, with an open and participatory approach.
- There is frustration at the **lack of understanding between governmental departments** as to how the energy transition impacts on all sectors of society and, therefore, each different governmental department. The energy transition is not merely a ‘problem to be solved’ by the environmental or energy policy

28 Interviews with a number of community energy practitioners alluded to frustrations with Local Authorities in relation to the speed at which low and zero carbon initiatives were adopted, and also, the disconnect between directives from higher levels of government and what was being delivered at Local Authority level.

sector (see also Energy PIECES report by Hirmer and Robison, 2019).

- **Traditional top-down modes of governance do not work.** Where publics are consulted with or expected to engage with energy projects at a late stage ‘participation’ exercises are ineffective. Co-design and cooperation from the very beginning are needed to ensure more citizen buy-in and commitment to a co-designed and co-agreed plan²⁹.
- **A lack of cooperation between social actors.** Local Authorities, who cooperate with a number of different civil society actors, do not tend to facilitate and encourage civil society groups to bridge issues – such as social housing with renewables and fuel poverty, health and wellbeing with cleaner transport and public spaces etc.

4.1. Practical Local Authority support for existing activities (Community/Cooperative/Citizen-led initiatives)

Firstly, as reported in Section 3, there is a wealth of citizen-led projects already in existence, where publics are already engaged and participating in the energy transition and energy systems. These projects’ success, or failure, can often be significantly impacted by how much support is offered by their Local Authorities³⁰. As a starting point, Local Authorities need to actively keep

29 Interview with citizen engagement practitioner who saw as a part of a recent EU wide project, how effective participation could be if communities and citizens were approached and consulted with from the very beginning of a project shaping future visions.

30 A common thread to interviews with community energy practitioners was that they experienced a lack of support to initiatives from their Local Authorities.

up to date with projects that are already happening on the ground and explore how they can support these initiatives currently in operation (be they community energy, cooperative energy, sustainability projects, transition towns movements or a local campaign). Best practice then needs to be publicised and shared through local, national, and international networks as a means of upscaling good practice and encouraging and normalising more citizen-led and citizen-participatory practices. Lessons on how best to support such activities, drawn from a number of interviews with citizen-led and community-based practitioners and recent energy SSH literature are summarised briefly below³¹.

Procurement of renewable energy produced by community/cooperative energy groups

As a means of ensuring the future viability of the community and cooperative energy sector, Local Authorities can play a role by procuring renewable energy generated by such groups. This would give the sector greater security at a time where measures (or lack of measures) across the sector threaten its viability. This is reflected in the lack of community energy initiatives in Southern, Central and Eastern Europe (where there is a lack of a support structure for such developments), the scrapping of the feed in tariff in Germany and the UK (where there has been a drop in cooperative renewables and structural support for citizen-led initiatives) and a sudden policy change in Spain where self-consumption of energy from solar was disincentivised (see Friends of the Earth, 2018). Preferential measures can be incorporated in procurement tenders, that ensure a project's inclusiveness and reinvestment in the local economy are given more weight (Energy Cities, 2019). In Hanover for example (since 2007), municipal land for housing development are sold preferentially to developers of passivehaus³² buildings (Emelianoff, 2014). Such bold procurement measures could also be made applicable for citizen-led, renewable energy and sustainable related projects. However, a reported disconnect between community and cooperative energy and the understanding of the sector by local government and planning officials (in some cases) has hindered a more collaborative relationship³³. Addressing this disconnect would certainly benefit the community and cooperative citizen-led sector.

.....
31 For a more in-depth discussion on Local Authorities supporting citizen-led initiatives, see Energy Cities paper: 'How Cities back Renewable Energy Communities: Guidelines for local and regional policy makers'.

32 Passivehaus or passive house is a specific building standard for highly insulated, energy efficient buildings with very low ecological footprints.

33 Interviews with a number of community energy practitioners showed that Local Authority knowledge and willingness to support citizen-led energy initiatives were low. Procurement of energy produced by community and cooperative groups was often cited as a means of supporting local projects.

Joint-ventures

Where community capacity is low (and vice versa, where Local Authority capacity is low), joint-ventures on energy system and related projects must be an avenue for future developments. It has been shown that where authorities do have adequate internal capacity, that they can deliver much more advanced climate policy than their national governments (Eckersley, 2018). Pooling expertise in a way which can increase capacity could streamline a number of potential citizen-led energy initiatives. Joint-ventures could be particularly successful where public assets can be used by local community energy projects to develop new innovative energy projects, that also deliver social benefits.

Championing

There is a vital role for Local Authorities to play in raising awareness, publicity and championing best practice where local citizens have taken positive steps to contribute to the energy transition³⁴. Such simple steps can lead to replication of projects and making citizen participation in energy systems mainstream, more realistic and the norm rather than a niche. The multi-faceted nature of the energy transition (and the diverse number of actors that it will involve delivering it) needs a multi-faceted effort to publicise its urgency, which includes more and diverse media attention (Voskoboynik, 2018)

Raise staff awareness and cooperation

Mainstreaming knowledge within Local Authorities is as important as mainstreaming knowledge amongst a wider populace. In fact, in several cases, individuals within publics are better informed on energy transition matters than staff or elected bodies within local governments³⁵. Increasing the knowledge of elected representatives on general sustainability matters has been found to be a desirable ambition (Robison et al, 2018). There is also a case to be made for more cooperation and cross departmental activities within Local Authorities, where more emphasis is given on the fact that protecting the environment and transitioning to renewable energy sources can also be linked to other social goals and lead to financial savings and job creation (see the example of Hanover in Emelianoff, 2014). The example of Gelsenkirchen council in Rhine-Westphalia, Germany where a collaborative approach was taken both within the council and

34 Interviews with some community energy practitioners made mention of the need for more observable, public support of community and cooperative energy initiatives by Local Authorities.

35 Interviews with a number of community energy practitioners suggested that energy and climate change knowledge amongst Local Authority staff members tended to be low. It was reported that there was a tendency for energy and climate related matters to be siloed in environmental departments, rather than a subject that transcends a number of different departments.

between the public bodies, evidenced that implementing their climate related policies and activities became much easier (Eckersley, 2018). Also, in the city of Växjö, Sweden, training was given to a quarter of the 6,000 municipal employees, on issues to do with sustainable development, climate issues and biodiversity. This led to a more informed Local Authority, and a more cohesive approach to addressing the energy transition of their city (Emelianoff, 2014).

4.2. Supporting wider participation: Deliberative democracy

“The challenge is to develop systems of governance that can know, respond to and work with... these diverse, emerging and ongoing forms of energy participation and not see them as something to be controlled or denied. Such responsiveness to ecologies of diverse and continually emergent public meanings, values and actions is crucial to building more socially sustainable, inclusive, responsible and just socio-technical (energy) transitions.”

(Chilvers et al, 2018, p.209)

Apart from supporting existing initiatives, the very nature of the climate challenge means that there is a need to engage more with a greater number of people and allow for the input of more citizens in policy development. It is worth being aware of the fact that governance structures are extremely context specific and the best forms and practices of participatory public engagement will therefore vary across communities in different regions (Burke and Stephens, 2017). However, similarities lie in the overarching intentions of participation – to be more inclusive of a greater part of a populace. This Section focuses on the need for citizen participation in shaping policy and future visions. The Energy-PIECES Masterclass organised prior to this secondment raised several of these issues relating to participation. It is also important to note that some participative measures are in their early stages of use – particularly for climate related issues. Indeed, in some cases they are as yet unused. Longitudinal research into the effectiveness, inclusiveness and success of such measures in relation to energy and climate issues would be useful in future. Further resources which can aid Local Authorities in learning more about participative approaches are included at the end of this report.

In this section we focus on **deliberative democracy** methods – that is, the purposeful effort to ensure that the will of the people is enacted, through practicing an inclusive, participatory mode of governance. This involves a two-way decision-making process between citizens and decision makers, rather than traditional top-down governance models, where citizens are dictated to. It is claimed that citizen participation can contribute a mix of alternative knowledge, endorse support, foster understanding and anticipate any problems

in policy implementation (Irvin and Stansbury, 2004). Through the guidance given by expert views, facts and differing perspectives, deliberative democracy can be a way of improving the quality of citizen engagement with energy issues (Canfield et al, 2015). It can also be a way of creating a more even platform for different sectors of society to participate in shaping future energy policies, bring new ideas and experiences into wider debates and challenge deep seated beliefs, and stimulate more trust in decision-making processes (see Coote and Lenaghan, 1997). This is of particular importance when considering how policy has tended to be developed in past practices, where the relationship of ‘deep incumbency’ (Johnstone et al, 2011) between governments and energy industry has shaped, (or mis-shaped) energy policies. This is reflected in a report on how the EU’s 2030 renewable energy targets were set, which showed that they had been weakened by the pressure of the Commission, Eastern European states and the energy industry, much to the disappointment of more ‘green’ minded bodies (Ydersbond, 2016). If there is more plurality in who partakes in policy development, with less emphasis on financial profits (as Energy Democracy and Energy Justice literatures propose as a part of a just energy transition) the nature of future policy development may also lead to a more transformational regime change (Brisbois, 2019). This, it is argued, can be addressed through participative and deliberative methods.

However, there is also criticisms of participatory methods as being expensive, time consuming and merely symbolic, and that there is often an ingrained distrust of public knowledge and capacity to make important decisions on policy developments (Irvin and Stansbury, 2004). Nevertheless, as Hysing (2015) points out, impact can occur in a number of different ways, and participation can contribute to wider policy outputs and inform wider public debate.

There are a number of deliberative democracy methods that can be used, but all are similar in their use of a mini-public. Mini-publics are a representation of society at large. They are selected as a means that reflect the broader population, aiming to ensure representation with consideration of e.g. age, gender, ethnicity, disability, income, geography, education and religion etc. (Escobar and Elstub, 2017). Competent facilitation is also key, and their ability to engage people “to learn how to adapt and change priorities, attitudes and behaviours” (Elelman and Felfman, 2018, p84). We now discuss several methods in turn.

Citizen Juries are a means of allowing citizens to deliberate and come to a final ‘judgement’ on a particular topic of contention. Juries tend to be small in number (between 15-25 citizens) and are diverse rather than being exactly representative of wider society and operate over a number of days. Following the formation of a mini-public, a deliberative process begins. Deliberation is “a form of communication that enables people to make informed and public-spirited decisions on an issue after having considered and discussed existing evidence, perspectives and arguments” (Roberts and Escobar, 2015, p4). Citizen Juries then draw conclusions based on the deliberative process, and a verdict passed as a conclusion.

 **Citizen Juries on Windfarm Development** (across Scotland) was a research project led by Edinburgh and Strathclyde Universities, concerned with exploring how deliberative processes could engage citizens to contribute to energy related decision making processes, through deliberating the future development of wind energy in Scotland. The research project supported the value of practicing deliberative citizen juries, concluding that: “When citizens are given the time, resources and support to learn and deliberate together about public issues, they can grasp complex debates and collectively make considered decisions” (Roberts and Escobar, 2015, p234-5). Further conclusions included that citizens had the ability to engage with and understand complex set of issues and be flexible in compromising on solutions when guided through deliberative methods. It was also concluded that there was enjoyment to be had in the deliberative process amongst those that took part, as well as participants learning important civic skills. See more here: <https://www.involve.org.uk/resources/case-studies/citizens-juries-wind-farm-development-scotland>

Citizen Assemblies differ from a Citizen Jury in that they tend to be larger, they operate over a number of months and their outputs are usually detailed proposals for consideration by governments. A recent example of a Citizens’ Assembly in Ireland saw a mini-public gathering to discuss the efficacy of the Irish Government in addressing climate change. Following this assembly, recommendations for stronger climate action have been proposed, which were then put in front of the Houses of the Oireachtas (the two houses of the Irish parliament) for consideration³⁶. It is noteworthy that one of the main calls of the recently emerged Extinction Rebellion movement (in the UK), is the establishment of a Citizens’ Assembly to address the dual challenges of a climate and ecological crisis and to create a roadmap for the UK in able to shape a zero-carbon future (Extinction Rebellion, 2019). This is in part a recognition that for transitions to occur, citizens must be involved, while also a criticism of how governments have done things in the past³⁷.

Digital participation has been used in a number of examples across Europe. Decidim (from the Catalan, ‘we decide’), is an open source participatory democracy tool which so far has been used across cities such as: Helsinki, Finland³⁸; Waterloo, Belgium³⁹; and Barcelona, Catalonia as a means of co-producing city plans, and co-deciding

36 See further information here: <https://www.citizensassembly.ie/en/News/Publication-of-Citizens-Assembly-Final-Report-on-How-the-State-can-make-Ireland-a-Leader-in-Tackling-Climate-Change.html>

37 Extinction Rebellion refer to the fact that governments tend to be influenced by voter disapproval, and generate short-term goals (to fit with the short-term election cycles). They also note that governments are heavily influenced by corporate lobbying groups, wealthy financiers, and a biased and commercial media.

38 OmaStadi: <https://omastadi.hel.fi/?locale=en>

39 Waterloo: <https://waterloo.monopinion.belgium.be/>

how public funds are used. Originating in Barcelona, and organised by the City Council there, the method is seen as a means of democratising political participation, allowing citizens to use digital platforms, similar to social media, as a means of participating in political and policy development processes (Stark, 2017). SomEnergia, Catalonia’s largest energy cooperative has also used the platform for its general assembly and further debates on their mission (Energy Cities, 2019). Although more people have access to digital platforms, consideration should be given to those who might lack access to such processes (Elelman and Feldman, 2018).

Creative approaches can also be important tools in participatory methods of engagement with citizens on energy issues.

 **Living Streets.** An Energy Cities project which developed action and reflection networks, composed of local stakeholders and citizens in 7 pilot cities (Brussels, Milton Keynes, Ivanic-Grad, Zadar, Turin, Rotterdam, La Rochelle) to improve the use of streets, and to create an urban planning vision that works for the wellbeing of urban citizens. This deliberative initiative enabled inhabitants to temporarily transform their street into a sustainable place. One of the main strategic questions of the project was how citizens can organise their daily lives without using cars as much as currently done. By removing cars from public spaces, new spaces became available for other functions – a creative opportunity was therefore created, where citizens could rethink how streets can be used. See more here: <https://energy-cities.eu/project/life-living-streets/>

Making climate change issues more relatable to the experienced lives of citizens (see the Living Streets example above) is vitally important if engagement and participation in energy related issues is desired (Scannell and Gifford, 2011). Using fear as an inducement to participate is known not to be an effective model for participating (O’Neill, 2009), while messages that are too optimistic tend to play down the urgency and risks that climate change poses (Voskoboynik, 2018). Messages need to go beyond ‘conventional’ science reporting too, and more artistic approaches to creative engagement and cultural renewal (Galafasi et al, 2018). There are a number of creative approaches that can be adopted to encourage the participation of citizens in energy transitions and systems. These can include creating more accessible storytelling techniques, visual art, short films and imaginary techniques, and the process of gamifying (seen below) – all techniques that can lead people to envision possible energy futures. By understanding past models of energy generation, ownership and developments and also by narrating and mapping the way people have engaged with energy in the past, citizens can be better equipped to engage with how energy systems could (and should) look in the future. An interesting project which has collected a number of past and future energy narratives, is UK based project ‘Stories of Change’ (further information included in the Resources Section at the end of the report).

 **VilaWatt project** (Viladecans, Catalonia). A creative tool was used by the VilaWatt public-private-citizen partnership to further its energy transition. Their project involved local stakeholders through peer-to-peer learning, competition and gamification. Energy teams in each of the neighbourhood's buildings converted project ideas (collected from a citizen forum) into concrete actions. Also, energy savings achieved by residents of buildings partaking in the project, were rewarded in virtual currency. This new energy currency, called "Vilawatt", was established as a way of converting energy savings into purchasing power. Complementary currencies like these have proven to encourage new energy behaviours and energy efficiency investments. See more here: <https://www.uia-initiative.eu/en/uia-cities/viladecans>

Although the benefits of a participatory ethos can be multiple, it is also important to note that participation in itself is not necessarily 'good' as "bad participative practice causes mistrust, wastes people's time and money and can seriously undermine future attempts at public engagement" (Involve, 2005, p.12). In some cases, it can in fact cause more conflict, or cause frustration if not facilitated professionally. It is therefore vitally important to ensure that participative practices are led by facilitators who can ensure a deliberative discussion. Also, despite the appearance of being a more just way of engaging with citizens, participative methods can be exclusive and fail certain sectors of society. Participatory methods can at times be difficult for some sectors of society to engage in, and those that do collaborate, might only be doing so in order to advocate their own personal interests, rather than partake in finding genuinely community negotiated solutions (Elelman and Feldman, 2018). However, being mindful of these matters can help avoid any pitfalls.

5. Conclusions and Recommendations

Throughout this report, it has been shown that the relationship between Local Authorities and citizens is crucial in encouraging a more collaborative approach to the energy transition. The relationship between Local Authorities and their citizens, however, needs much more emphasis, in order to realise and develop the possibilities of collaborative approaches in the energy transition. Cooperation also needs to be viewed as a longitudinal process, where citizens are co-designers and co-deliverers of energy projects (rather than consulted once) and where Local Authorities are “deciding with citizens rather than for citizens” (Energy Cities, 2017, p.30). Communities and citizens need to be central to energy development projects, not just seen as a peripheral group to be ‘dealt with’ or insincerely consulted with. Citizen engagement, as seen in community energy projects, joint ventures and activism also embodies what is desired from an active, strong civil society, allowing citizens to determine developments for a communal good, rather than having projects thrust upon them with little sense of power and self-determination. The same can be applied to the development of visions and policies – although much more practical (and research) work is needed to further this agenda.

The aim of this report was to consider how Local Authorities can better engage with publics as a part of the energy transition in a meaningful way and support the active participation of citizens in energy systems and the energy transition. The report has been informed by energy Social Science and Humanities literature as a means of recognising that the energy transition is not merely a technological transition, but a social one. The report suggests the following key recommendations:

- The energy sector to date has been led by deep-set relationships between traditional energy incumbents and governments, leaving little room for citizen participation (at all levels – policy, production, distribution etc.). Considerable energy-SSH research proposes that **the energy transition needs to be more inclusive of a wider set of people** if it is to gain any traction. This can be achieved through firstly understanding the ethics and importance of participation (energy justice and democracy), and practically, through engagement with existing citizen led-projects and engaging with citizen-led activist movements.
- Local Authorities need to **recognise that answers often lie within their communities**, and that citizens are *already* participating in energy systems, and contributing to the energy transition, in niche ways. A concerted effort to engage with existing projects is fundamentally important.
- Local Authorities can **support citizen-led initiatives that already exist and encourage more uptake** through:
 - Procurement of locally generated renewable energy from community/cooperative energy projects.
 - Implementing a collaborative approach to delivering the energy transition by offering resources, officials’ time, guidance and a more united relationship between communities and Local Authorities.
 - Where community capacity and Local Authority capacity is low, cooperate on joint-ventures.
- Local Authorities can **raise projects’ visibility and recognition** through raising awareness amongst their own members of staff and between departments of the benefits of citizen participation in the energy transition. Local Authorities can also use their established relationship with local and national media, to highlight the initiatives that occur within their region. Normalising such projects and identifying citizen-led initiatives as key players in the energy transition could lead to their replication.
- A **focus on justice can be a central guiding philosophy for the energy transition** (being mindful of justice in both local and global terms) and can contribute towards a transition which is inclusive and fair. Citizen participation approaches should therefore **seek out the underrepresented** – and be inclusive of age, gender, race, minorities and geography.
- **Community or citizen ownership of energy initiatives** developed by Local Authorities means citizens are better able to engage with energy systems. Ownership can involve: financial stakes in community energy initiatives/projects and remunicipalisation movements and the co-design (and a sense of co-ownership) of energy visions and projects through deliberative processes.
- For an active and engaged citizenship, an active and engaged Local Authority is also needed. **All members of staff within Local Authorities need to be literate around the challenges that the energy transition will entail**, and the need for the transition to be just through adopting a collaborative approach.
- There is need for much more **cross-departmental collaboration** within Local Authorities, including an understanding of energy transition matters going beyond being an ‘environmental’ issue alone.

- **Engaging with the many forms of participation** - including citizen activism, protest and campaigns which reflect the concerns of citizens - is key to nurturing the relationship between local governments and the public, fostering **trust** between both parties and encouraging a more deliberative relationship between both.
- Following from this, **Local Authorities need to be more approachable** – adopting an open-door policy and allowing citizens to be able to engage with developments much more easily. This can be done through actively seeking out existing initiatives and movements and inviting more citizens to shape policies.
- Adopt **participative governance strategies that allow for the input of citizens** into all-city and/or all-region vision strategies. Although there are some examples of good practice, it is certainly not yet the norm.
- Local Authorities have a specific role to play in ensuring that their citizens' views and hopes are fed into the **National Energy and Climate Plans** that will be prepared for by the end of 2019 by all EU member states. Failing this, there is a role to play in raising awareness of these plans, ensuring that citizens can engage with them and contribute to achieving, and surpassing the goals set out for each nation state.
- **Ideas developed through creative processes could lead to a wider participative audience.** Not all citizens will be eager to be part of a local energy strategy if delivered in a traditional, structural way - but they may be if paired with a wider vision of social development, mobility, local wealth and health, culture and art.
- Further **in-depth analysis and longitudinal research** is needed to test the participatory advancements of local governments in the energy transition.

6. Resources: EU initiatives, funding and research

Below are a number of recent organisations, funding sources and projects that might be of interest for Local Authorities wishing to improve their approaches to local energy governance, and work with and promote citizen participation in energy issues. They are organised alphabetically.

Drift (Dutch Research Institute for Transitions): is a leading research group developing Transition Management approaches. Their core area of expertise lies in sustainability transitions and transition governance. Within these, there are seven focus areas: Resources & Circularity, Welfare & Justice, Social Innovation, Governance & Politics, New Economies, Urban Transitions and Transformative Knowledge. <https://drift.eur.nl/>

ECCO (Energy Community Co-Operatives) is a 4-year project (2017-2021) focused on the growth of Energy Co-operatives in north west Europe. It is a project that focuses on knowledge exchange between existing ECCOs and inspiring policymakers and community groups to initiate their own Community Co-Operatives <http://www.nweurope.eu/projects/project-search/ecco-creating-new-local-energy-community-co-operatives/>

Energy Cities represents more than 1000 local authorities from 30 countries, mainly municipalities, but also inter-municipal structures, local energy management agencies, municipal companies and groups of municipalities. They have produced a large number of publications that can help Local Authorities to advance the energy transition in their municipality, city, and regional areas. Publications are free for use. Networking opportunities and the chance to learn from the experiences of other Local Authorities across Europe, is possible through membership. <http://www.energy-cities.eu/>

Energy Democracy is a network of practitioners, researchers and activists who are working in the field of Energy Democracy. The Energy Democracy website is an open knowledge platform of the International Energy Democracy alliance. Over 300 groups and persons from across the world exchange via the Energy Democracy mailing list key developments and materials to advance the struggle for a just transition towards energy democracy. Resources, recent information and workshops available. <http://www.energy-democracy.net/>

Energy-SHIFTS (Energy Social sciences & Humanities Innovation Forum Targeting the SET-Plan) contribute to a European Energy Union that places societal needs centrally, by further developing Europe's leadership in using and applying energy-related Social Sciences and

Humanities (energy-SSH). Since the energy transition will fundamentally alter the way that EU citizens live, work and play, it is especially important that EU energy policy engages with Social Science and Humanities-informed themes such as inclusivity, social justice, or democracy. Energy-SHIFTS responds to this need with an inclusive and engaging Forum which will enhance dialogue and cooperation between energy-related stakeholders. The project runs from 2019 – 2021. <https://energy-shifts.eu/>

Horizon 2020 is a major funding programme for EU member states. Horizon Europe, an ambitious €100 billion research and innovation programme will succeed Horizon 2020.

mPOWER (Municipal Power) is a project funded by the Horizon 2020 EU Research and Innovation programme which runs from 2018 – 2022 and involves seven partner organizations. mPOWER will enable an in-depth, wide-scale and systematic peer-to-peer learning programme among at least 100 local public authorities, in order to replicate innovative best practices in municipal energy and developing ambitious energy transition plans. <https://municipalpower.org/about-mpower/>

PROSEU (Prosumers for the Energy Union) is a Horizon 2020 research project, bringing together eleven project partners from seven European countries. It aims to enable the mainstreaming of the renewable energy Prosumer phenomenon into the European Energy Union. Prosumers are active energy users who both produce and consume energy from renewable sources. The project runs from March 2018 to February 2021. <https://proseu.eu/>

Rapid Transition Alliance is an initiative which works to gather, share and demonstrate evidence of what is already possible in energy transitions to remove excuses for inaction and show ways ahead. These might be stories of community action, innovative policy or very personal, pivotal moments that allow us to see the world differently. <https://www.rapidtransition.org/>

REScoop EU (Renewable Energy Sources Cooperative) is the European federation of renewable energy cooperatives, working with communities and representing the voice of cooperative energy in the European energy debate. They are a growing network of 1,500 European REScoops and their 1,000,000 citizens. Resources and support are available through their website: <https://www.rescoop.eu/>

Stories of Change (UK) is a project that aimed to help support lively public and political conversations about energy by looking at narratives and experiences of its

past, present and future. The project drew on history, literature, the arts and social and policy research to encourage a more creative and imaginative approach to current and future energy choices. They saw stories as offering an engaging route into thinking about the past and present and imagining possible futures. <https://storiesofchange.ac.uk/>

SHAPE ENERGY (Social Sciences and Humanities for Advancing Policy in European Energy) which ran from 2017-2019, was a Horizon 2020 project which developed a new European platform for energy-related Social Sciences and Humanities (energy-SSH). A large number of resources from the project are available to delve more into social aspects of energy related matters, including reports on a set of 17 city workshops using storytelling

methods to explore local energy challenges <https://shapeenergy.eu/>

Urban Innovation Actions: The Urban Lab of Europe is an initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. Urban Innovative Actions (UIA) offers urban authorities the possibility to take a risk and experiment with innovative and creative solutions by providing funding for projects: UIA co-finances 80% of a project's activities. They also hope to capture and share knowledge that projects can generate, and to see how potential solutions work in practice. <https://www.uia-initiative.eu/en/call-proposals/5th-call-proposals>

7. Acknowledgements

The authors would like to acknowledge the support and guidance given by Energy Cities staff, in particular Stéphane Dupas and Kinga Kovacs, and the valuable conversations with Alix Bolle, Tatjana Veith and Julien Joubert. Thanks also to Daan Creupelandt at REScoop, Ingird Prikken, Jemma Knowles at Plymouth Energy, all at Ynni Sir Gâr (Carmarthenshire Energy), Lavinia Steinfort at Transnational Institute and Marta Toporek at Client Earth for their willingness to exchange ideas on the topics raised in this report. Thanks also to a number of energy-SSH researchers that were contacted during the course of this work – for signposting and recommending relevant research projects. Thanks also to a number of community energy practitioners who were also consulted before and during this report, whose practical experiences and suggestions have also informed this research. Finally, thanks for the support provided by the Global Sustainability Institute at Anglia Ruskin University, to Chris Foulds and Mel Rohse, and particularly to Felicity Clarke for her administrative assistance. This work was made possible by the financial support by UKERC (Grant number EP/R007071/1).

8. References

- Aiken, G., 2012. Community transitions to low carbon futures in the transition towns network (TTN). *Geography Compass*, 6 (2), 89–99.
- Batel, S., Devine-Wright, P., Tangeland, T., 2013. Social acceptance of low carbon energy and associated infrastructures: a critical discussion, *Energy Policy*, 58, pp. 1-5
- Bickerstaff, K., Walker, G., Bulkeley, H., 2013. *Energy Justice in a Changing Climate: Social Equity and Low-carbon Energy*. Zed books, London.
- Blanchet, T., 2015. Struggle over energy transition in Berlin: How do grassroots initiatives affect local energy policy-making? *Energy Policy*, 78, 246-254
- Brisbois, M. C., 2019. Powershifts: A framework for assessing the growing impact of decentralized ownership of energy transitions on political decision-making. *Energy Research and Social Science*, 50, 151-161.
- Buckland-Jones, S., 2019. Community and local ownership of renewable energy in Wales. Institute of Welsh Affairs: <https://www.iwa.wales/click/2019/03/community-and-local-ownership-of-renewable-energy-in-wales/>
- Burke, M.J., Stephens, J.C., 2017. Energy democracy: Goals and policy instruments for sociotechnical transitions, *Energy Research & Social Science*, 33, 35-48.
- Canfield, C., Klima, K., Dawson, T., 2015. Using deliberative democracy to identify energy policy priorities in the United States. *Energy Res. Soc. Sci.*, 8, 184-189.
- Chakraborty, A., 2018. How a small town reclaimed its grid and sparked a community revolution. *The Guardian* [online] 28 February <https://www.theguardian.com/commentisfree/2018/feb/28/small-town-wolfhagen-community-revolution-german-europe-energy-contract>
- Chilvers, J. and Longhurst, N., 2016. Participation in transitions(s): reconceiving public engagements in energy transitions as co-produced, emergent and diverse, *J. Environ. Policy Plann.* 18 (2016) 585-607
- Chilvers, J., Pallett, H., and Hargreaves, T., 2018. Ecologies of participation in socio-technical change: The case of energy system transitions, *Energy Research and Social Science* 42, 199-210
- Christen, G., and Hamman, P., 2014. Des inégalités d'appropriation des enjeux énergétiques territoriaux? Analyse sociologique d'un instrument coopératif autour de l'éolien "citoyen". [Vertigo] *La revue électronique en sciences de l'environnement*, 14(3)
- Client Earth, 2018. Public participation as part of the EU Climate Governance Regulation could help transition to a cleaner, more efficient energy future <https://www.clientearth.org/public-participation-part-eu-climate-governance-regulation-help-transition-cleaner-efficient-energy-future/>
- Coote, A. and Lenaghan, J., 1997. *Citizens' Juries: Theory into practice*, London, Institute for Public Policy Research.
- Cowell, R., Devine-Wright, P., 2018. A 'delivery-democracy dilemma'? Mapping and explaining policy change for public engagement with energy infrastructure. *Journal of Environmental Policy and Planning*. 20, 4, 499-517
- Creamer, E., Eadson, W., Van Veelen, B., Pinker, A., Tingey, M., Brauholtz-Speight, T., Markantoni, M., Foden, M. & Lacey-Barnacle, M., 2018. Community energy: entanglements of community, state, and private sector. *Geography Compass*, 12, 7.
- Devine-Wright, P., 2009. Rethinking NIMBYism: The Role of Place Attachment and Place Identity in Explaining Place-protective Action. *Journal of Community and Applied Social Psychology*, 19 (4), 26-41.
- Eames, M. and Hunt, M., 2013. Energy justice in sustainability transitions research. In Bickerstaff, K.; Walker, G. and Bulkeley, H. (eds) *Energy Justice in a Changing Climate: Social Equity and low-carbon energy*. Zed Books, London.
- Eckersley, P. 2018. Who shapes local climate policy? Unpicking governance arrangements in English and German cities. *Environmental Politics*, 27:1, 139-160.
- Elelman, R. and Feldman, D.L., 2018. The future of citizen engagement in cities – The council of citizen engagement in sustainable urban strategies (ConCensus) *Futures* 101, 80-91.
- Emelianoff, C., 2014. Local Energy Transition and Multilevel Climate Governance: The Contrasted Experiences of Two Pioneer Cities (Hanover, Germany and Växjö, Sweden). *Urban Studies* 51 (7) 1378-1393.
- Energy Cities, 2016. *The Energy Transition: New Dialogues between Cities and Stakeholders*
- Energy Cities, 2017. *Local Energy Ownership in Europe*
- Energy Cities, 2018a. *Living Streets From citizen engagement to citizen ownership: A guidebook for municipalities*
- Energy Cities, 2018b. *Local Energy and Climate Roadmaps: 5 city visions for 2050*
- Energy Cities, 2018c. *Fabrique de Transition Démocratique Implication des Citoyens dans la Transition Énergétique en Europe : Étude Exploratoire*
- Energy Cities, 2019. *How Cities back Renewable Energy Communities: Guidelines for local and regional policy makers*
- Escobar, O. and Elstub, S., 2017. *Forms of Mini Publics: An introduction to deliberative innovations in democratic practice. Research and Development Note*. New Democracy. Available at: <https://www.newdemocracy.com.au/2017/05/08/forms-of-mini-publics/>
- European Commission, 2019. 'Clean energy for all Europeans' <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans>

- European Union, 2018. Directive (EU) 2018/2001 of the European Parliament and of the Council Of 11 December 2018 on the Promotion of the use of Energy from Renewable Sources <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=EN>
- Extinction Rebellion, 2019. Our Demands. <https://rebellion.earth/the-truth/demands/>
- Foulds, C. and Robison, R., 2018. 'Mobilising the Energy-Related Social Sciences and Humanities' in *Advancing Energy Policy Lessons on the Integration of Social Sciences and Humanities* (ed Chris Foulds & Rosie Robison) Palgrave Macmillan.
- Fraune, C., 2015. Gender matters: Women, renewable energy, and citizen participation in Germany. *Energy Research and Social Science* 7, 55-65.
- Friends of the Earth Europe, 2018. Unleashing the Power of Community Renewable Energy. Available here : http://foeeurope.org/sites/default/files/climate_justice/2019/community_energy_booklet_final.pdf
- Galvin, R., 2018. Trouble at the end of the line: Local activism and social acceptance in low-carbon electricity transmission in Lower Franconia, Germany. *Energy Research & Social Science*. Volume 38, Pages 114-126
- Galafassi, D., Kagan, S., Milkoreit, M., Heras, M., Bilodeau, C., Bourke, S.J., Merrie, A., Guerrero, L., Pétursdóttir, G., Tàbara, J.D., 2018. 'Raising the temperature': the arts on a warming planet. *Current Opinion in Environmental Sustainability*, 31, 71-79.
- Gibbs, D. and Jonas, A.E.G., 2000. Governance and regulation in local environmental policy: The utility of a regime approach. *Geoforum*, 31 (3), 299-313.
- Goodman, J., 2018. Researching climate crisis and energy transitions: Some issues for ethnography. *Energy Research and Social Science* 45, 340-347.
- The Green Alliance, 2019. Community energy 2.0: The future role of local energy ownership in the UK (Available: https://www.green-alliance.org.uk/resources/Community_Energy_2.0.pdf)
- Greenpeace International, 2015. Energy [R]evolution. A sustainable world: Energy Outlook 2015. Available at : <https://www.greenpeace.org/archive-international/en/campaigns/climate-change/energyrevolution/>
- Grossmann, M. & Creamer, E., 2016. Assessing diversity and inclusivity within the Transition movement: an urban case study *Environmental Politics*, 161-182.
- Hain, J.J., Ault, G.W., Galloway, S.J., Cruden, A., McDonald, J.R., 2005. Additional renewable energy growth through small-scale community orientated energy policies. *Energy Policy*, 33, 119 - 1212.
- Hawkey, D., 2015. European Engagement with Local Energy Systems. Edinburgh, University of Edinburgh. Available from www.sociology.ed.ac.uk/leukes
- Healy, N. and Barry, J., 2017. Politicizing energy justice and energy system transitions: fossil fuel divestment and a "just transition". *Energy Policy* 108, 451-459.
- Heffron, R.J and McCauley, D., 2017. The concept of energy justice across the disciplines. *Energy Policy* 105, 658-667.
- Henderson, C., 2013. *Aboriginal Power: Clean Energy and the Future of Canada's First Peoples*. Rainforest Editions, Ontario.
- Hirmer, S. and Robison, R., 2019. Policy options for enhancing Productive Uses of Energy in low-resource settings in the Global South. London: UK Energy Research Centre.
- Hoppe, T., Graf, A., Warbroek, B., Lammers, I., & Lepping, I., 2015. Local governments supporting local energy initiatives: Lessons from the best practices of Saerbeck (Germany) and Lochem (The Netherlands). *Sustainability*, 7(2), 1900-1931.
- Hysing, E., 2015. Citizen participation or representative government - Building legitimacy for the Gothenburg congestion tax. *Transport Policy*, 39, 1-8.
- Involve, 2015. People & Participation: How to put citizens at the heart of decision-making. Involve, London (UK). <http://www.involve.org.uk/sites/default/files/field/attachemnt/People-and-Participation.pdf>
- Irvin, R.A., Stansbury, J., 2004. Citizen participation in decision making: is it worth the effort? *Public Administration Review*, 64, 1, 55-65.
- Jefferson, M., 2008. Accelerating the transition to sustainable energy systems. *Energy Policy* 36 (11), 4116-4125.
- Jenkins, K., Sovacool, B. K., McCauley, D., 2018. Humanizing sociotechnical transitions through energy justice: An ethical framework for global transformative change. *Energy Policy*, 117, 66-74.
- Johns, H., 2015. *Energy Revolution: Your Guide to Repowering the Energy System*. Permanent Publications, East Meon (UK).
- Johnstone, P., Stirling, A., and Sovacool, B., 2017. Policy mixes for incumbency: Exploring the destructive recreation of renewable energy, shale gas 'fracking', and nuclear power in the United Kingdom. *Energy Research and Social Science*, 33, 147-162.
- Kellet, J., 2007. Community-based energy policy: A practical approach to carbon reduction, *Journal of Environmental Planning and Management*, 50:3, 381-396.
- Komendantova, K., Riegler, M., Neumueller, S., 2018. Of transitions and models: Community engagement, democracy and empowerment in the Austrian energy transition. *Energy Research and Social Science*, 39, 141-151.
- Kunze, C. and Becker, S., 2014. *Energy Democracy in Europe: A Survey and Outlook*. Report for the Rosa Luxemburg Stiftung, Brussels.
- Lawhon, M., and Murphy, J.T., 2011. Sociotechnical regimes and sustainability transitions: insights from political ecology. *Prog Human Geography* 36 (3), 354 - 378.
- Lindberg, M.B., Markard, J. Anderson, A. D., 2018. Policies, actors and sustainability transition pathways: A study of the EU's energy policy mix. *Research Policy*.
- Lipp, J., 2007. Lessons for effective renewable electricity policy from Denmark, Germany and the United Kingdom. *Energy Policy* 35, 5481-5495.
- McCauley, D., Ramasae, V., Heffron, R.J., Sovacool, B.K., Mebratu, D., Mundaca, L., 2019. Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research. *Applied Energy*, 233-234, 916-921.

- Müller, M.O., Stämpfli, A., Dold, U., Hammer, T., 2011. Energy autarky: A conceptual framework for sustainable regional development. *Energy Policy*, 39, 5800-5810.
- Murphy, J., Smith, A., 2013. Understanding transition-periphery dynamics: renewable energy in the Highlands and Islands of Scotland. *Environment and Planning*, 45, 691-709.
- Newell, P. and Mulvaney, D., 2013. The political economy of the 'just transition'. *The Geographical Journal*, 179(2), 132-140.
- O'Neill, S. Nicholson-Cole, S., 2009. Fear won't do it. *Science Communication*, 30, 355-379
- Oteman, M., Wiering, M. and J.K. Helderma, J.K., 2014. The Institutional Space of Community Initiatives for Renewable Energy: A Comparative Case Study of the Netherlands, Germany and Denmark. *Energy, Sustainability and Society* 4: 11.
- REScoop, 2018. Mobilizing European Citizens to Invest in Sustainable Energy (Deliverable 2.3 - Municipality Approach). Available here: <https://www.rescoop.eu/blog/rescoop-municipality-approach>
- Renewables Networking Platform, 2019. Co-designing low carbon public services in Ii, Finland. <https://www.renewables-networking.eu/documents/FI-Ii.pdf>
- Roberts, J. and Escobar, O., 2015. Involving communities in deliberation: A study of 3 citizens' juries on onshore wind farms in Scotland. https://www.involve.org.uk/sites/default/files/field/attachemnt/citizens_juries_-_full_report.pdf
- Roberts, C., Geels, F.W., Lockwood, M., Newell, P., Schmitz, H., Turnheim, B., Jordan, A., 2018. The politics of accelerating low-carbon transitions: Towards a new research agenda. *Energy Research and Social Science*, 44, 304-311.
- Robison, R., Dupas, S., Mourik, R., Torres, M., and Milroy, E., 2018. *Europe's local energy challenges: stories and research priorities from 17 multi-stakeholder city workshops*. Cambridge: SHAPE ENERGY.
- Rogers, J.C., Simmons, E.A., Convery, I., Weatherall, A., 2008. Public perceptions of opportunities for community-based renewable energy projects. *Energy Policy*, 36, 4217 - 4226.
- Rogers, J.C., Simmons, E.A., Convery, I., Weatherall, A., 2012. Social impacts of community renewable energy projects: findings from a woodfuel case study. *Energy Policy*, 42, 239-247.
- Rohracher, H. and Späth, P., 2014. The interplay of urban energy policy and socio-technical transitions: The eco-cities of Graz and Freiburg in retrospect. *Urban Studies*, 51 (7): 1415-1431
- Rommel, J., Radtke, J., von Jorck, G., Mey, F., Yildiz, Ö., 2018. Community renewable energy at a crossroads: A think piece on degrowth, technology, and the democratization of the German energy system. *Journal of Cleaner Production* 197, 1746 - 1753.
- Sarrica, M., Brondi, S., Gavrila, M., Ferrucci, M., 2014. Between representation and self-perception: What kind of energy citizenship in Italy? *Bulletin of People-Environmental Studies*. 41. 13-17.
- Scannell, L., Gifford, R., 2011. Personally relevant climate change. *Environmental Behaviour*, 45, 60-85
- Scottish Government, 2019. Local and small scale renewables. <https://www.gov.scot/policies/renewable-and-low-carbon-energy/local-and-small-scale-renewables/>
- Seyfang, G. and Smith, A., 2007. Grassroots Innovations for Sustainable Development: Towards a New Research and Policy Agenda. *Environmental Politics* 16, 584 - 603.
- Seyfang, G., Park, J. J. and Smith, A., 2012. Community Energy In The UK 3S Working Paper 2012-11 Norwich: Science, Society and Sustainability Research Group <https://grassrootsinnovations.files.wordpress.com/2012/10/3s-wp-2012-11-cise.pdf>
- Seyfang, G., Park, J., Smith, A., 2013. A thousand flowers blooming? An examination of community energy in the UK, *Energy Policy* 61, 977 - 989.
- Sidortsov, R. and Sovacool, B., 2015. Left out in the Cold: Energy Justice and Arctic Energy Research. *Journal of Environ Stud Sci*, 5, 302-307.
- Sovacool, B., 2014. What are we doing here? Analyzing fifteen years of energy scholarship and proposing a social science research agenda. *Energy Research and Social Science*, 1, 1-242.
- Sovacool, B., Dworkin, M.H., 2014. *Global Energy Justice: Principles, Problems and Practices*. CUP, Cambridge.
- Sovacool, B., Sidortsov, R.V., and Jones, B. R., 2014. *Energy Security, Equality and Justice*. Earthscan, Abingdon, Oxon. UK.
- Sovacool, B., 2016. How long will it take? Conceptualizing the temporal dynamics of energy transitions. *Energy Research and Social Science*, 13, 202-215.
- Sovacool, B., Heffron, R.J., McCauley, D., Goldthau, A., 2016. Energy decisions reframed as justice and ethical concerns. *Nat. Energy* 1, 16-24.
- Sovacool, B., 2017. Contestation, contingency and justice in the Nordic low-carbon energy transition. *Energy Policy*, 102, 569-582.
- Stark, K., 2017. 'Barcelona's Decidim: An Open-Source Platform for Participatory Democracy Projects'. <https://www.resilience.org/stories/2017-09-12/barcelonas-decidim-offers-open-source-platform-for-participatory-democracy-projects/>
- St Denis, G. and Parker, P., 2009. Community energy planning in Canada: The role of renewable energy. *Renewable and Sustainable Energy Reviews* 13, 2088 - 2095.
- Strachan, P. A., Cowell, R., Ellis, G., Sherry-Brennan, F., and D. Toke, D., 2015. Promoting Community Renewable Energy in a Corporate Energy World. *Sustainable Development* 23. 96-109.
- Szulecki, K., 2018. Conceptualizing energy democracy. *Env. Polit.* 27, 21-41.
- Thombs, R.P., 2019. When democracy meets energy transitions: A typology of social power and energy system scale. *Energy Research and Social Science*, 52, 159-168.
- Toke, D., 2005. Explaining wind power planning outcomes: some findings from a study in England and Wales. *Energy Policy*, 33, 1527-1539.
- Toke, D., Breukers, S., Wolsink, M., 2008. Wind power deployment outcomes: How can we account for the differences? *Renewable and Sustainable Energy Reviews*, 12, 1129 - 1147.

- Warren, C.R., McFadyen, M., 2010. Does community ownership affect public attitudes to wind energy? A case study from south-west Scotland. *Land Use Policy* 27, 204 – 213.
- Walker, G. and Devine-Wright, P., 2008. Community renewable energy: What should it mean? *Energy Policy*, 36, 497-500.
- Walker, E.T., McQuarrie, M., Lee, C.W., 2015. 'Rising participation and declining democracy', in *Democratizing Inequalities* (eds Lee, C.W., McQuarrie, M., Walker, E.T.) New York University Press, New York, 2015.
- Webb, J., Tingey, M., & Hawkey, D., 2017. What we know about local authority engagement in UK energy systems: Ambitions, activities, business structures & ways forward. (pp. 1-68). London and Loughborough: UKERC and ETI.
- Willis, R., and Willis, J., 2012. *Co-operative renewable energy in the UK: A guide to this growing sector*, Cooperatives UK, Manchester.
- Wolsink, M., 2007. Planning of renewables schemes: deliberative and fair decision-making on landscape issues instead of reproachful accusations of non-cooperation *Energy Policy*, 35, pp. 2692-2704.
- Van Veelen, B.; Van der Horst, D., 2018. What is energy democracy? Connecting social science energy research and political theory. *Energy Research and Social Science* 46, 19-28.
- Voskoboyniuk, D.M., 2018. *The Memory we Could Be: Overcoming Fear to Create our Ecological Future*. New Internationalist, Oxford.
- Yadoo, A., Gormally, A., Cruickshank, H., 2011. Low carbon off-grid electrification for rural areas in the United Kingdom: Lessons from the developing world. *Energy Policy* 39, 6400 – 6407.
- Ydersbond, I.M., 2016. *Where Is Power Really Situated in the EU? Complex Multi-stakeholder Negotiations and the Climate and Energy 2030 Targets*. FNI Report 3/2016. Fridtjof Nansen Institute, Oslo.

