



Original research article



# Performing energy justice futures: How visions of just futures shape discourses and practices in the United Kingdom's community energy sector

Nayim Patel

UCL Institute for Sustainable Resources, University College London, UK

## ARTICLE INFO

## Keywords:

Energy justice  
Energy visions  
Community energy  
Science and technology studies  
Energy futures  
Sociotechnical imaginaries

## ABSTRACT

The UK's Community Energy sector is a grassroots-led movement that tackles the country's decarbonisation and fuel poverty challenges by building community-scale renewable projects and directing funds towards low-income households. Comparative studies indicate that community energy initiatives are more durable and engage citizens more deeply than public and private counterparts. Some scholars emphasise the importance of community energy intermediaries in aggregating knowledge across the sector and engaging in policy advocacy and argue that these intermediaries should be strengthened to support energy justice practices. However, less is known about how community groups and intermediaries across the sector understand energy justice. Drawing on the conceptual lenses of sociotechnical imaginaries and critical niche perspectives, this paper investigates the contending visions and practices of energy justice amongst community energy groups and intermediaries. Through qualitative interviews with 15 community energy groups and 5 community energy intermediaries, the paper finds a core institutionally stabilised imaginary (Alternative Economy), an emerging imaginary that is not yet institutionally supported by intermediaries (Just Transition), and a critical niche perspective that challenges the sector's claims to represent diverse communities (Beyond Inclusion). Understanding the differences between these visions and their supporting coalitions is crucial for effective public policy and sectoral strategy.

## 1. Introduction

The United Kingdom's Community Energy (CE) sector has been described as a primarily grassroots-led sector that explicitly aims to empower local communities to develop energy projects for their interests rather than corporate profit [1]. The CE sector aids the UK's decarbonisation efforts by implementing community-owned renewable energy projects, rolling out energy efficiency programmes, and designing innovative heat and storage systems. Meanwhile, the CE sector assists low-income and fuel-poor households through tailored energy advice and hardship funds. Consequently, this sector has emerged as a significant empirical case for exploring local and decentred energy justice practices within the UK [2–5]. This energy justice literature has revealed an uneasy relationship between the CE sector, austerity, and energy justice. CE groups contribute to procedural and distributive justice by rescaling decision-making processes and redirecting profits into local communities [2]. However, these practices are limited by austerity, UK policy, and a lack of recognition justice [2,3,5,6].

Some scholars argue that CE groups must engage closely with

intermediary organisations to develop robust energy justice practices and advise policymakers to strengthen intermediaries to aid energy justice policy efforts [3,5]. These CE intermediary organisations (CEIs) are not-for-profit organisations consisting of energy and policy analysts that assist the CE sector's development. These CEIs are crucial to upskilling CE groups, building knowledge capacity, and lobbying policymakers [7–9]. However, less is known about how CE groups and CEIs understand energy justice and whether their values and preferences are aligned. Therefore, this paper will empirically investigate how CE groups and CEIs understand issues around energy justice and the extent to which they have shared visions for the sector and the UK's energy transition more broadly.

This paper explores CE energy justice by describing the sector's sociotechnical imaginaries and critical niche perspectives. Sociotechnical imaginaries are “collectively held ... and publicly performed visions of desirable futures” ([10], p6). Collectives and institutions draw on institutional resources to stabilise their visions into self-reinforcing imaginaries [11,12]. Once stabilised, imaginaries guide decision-making processes and frame particular futures as preferable while contesting others [13]. In contrast, critical niche perspectives (CNPs) are

E-mail address: [nayim.patel.20@ucl.ac.uk](mailto:nayim.patel.20@ucl.ac.uk).

<https://doi.org/10.1016/j.erss.2024.103475>

Received 11 April 2023; Received in revised form 1 February 2024; Accepted 12 February 2024

Available online 24 February 2024

2214-6296/© 2024 The Author. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

visions that aren't collectively held or stabilised [9]. Collectives that aren't institutionally powerful advance CNPs to destabilise prevailing discourses [9]. Combining these two conceptual lenses enables this paper to describe the dominant and decentred energy visions within the CE sector and reveal the asymmetries between them and their supporting actors. Understanding who holds these visions and why is crucial for developing energy justice policy advice that adequately considers different actors' motives and needs.

This paper develops novel empirical data and critical insights into the CE sector's energy visions. This empirical data reveals the energy futures that different CE collectives hope to influence the UK's energy transition towards. The paper describes the roles that CEIs occupy in forming, stabilising, and circulating these energy visions, leading some to be more dominant than others. Following this, the paper generates two hypotheses regarding the relationship between energy justice and energy visions while adding to a growing literature that describes diverse and decentred energy visions and understandings of energy justice. These descriptions indicate that values and visions strongly structure energy justice discourses and practices and highlight how they are highly situated and contested.

## 2. Theory and context

This section discusses why decentred conceptions of energy justice literature should be investigated and describes the critical limitations of how this has been done thus far for the UK's community energy sector. Two interpretive frames for exploring visions are presented and critically compared. The section then details the background of the UK's community energy sector, highlighting the anchoring role that intermediary organisations play in the sector and describing how austerity and a shifting policy environment have impacted the sector's development.

### 2.1. Energy justice: moving towards decentred perspectives

Energy justice frameworks are analytical tools that guide practitioners and policymakers to ensure that energy programmes are equitable. These frameworks span distributional justice, procedural justice, and justice as recognition dimensions [14], cosmopolitan justice dimensions [15], and restorative justice dimensions [16]. This paper will focus on the first three tenets, which dominate the literature [17]. Distributional justice assesses an energy project's benefits and harms, the actor groups that receive these harms and benefits, and the modes of distribution [18]. Procedural justice focuses on which actor groups make rules and decisions and the processes by which actors can participate in decision-making [18]. Recognition justice focuses on identifying marginalised groups to ensure that their lives are not worsened by the energy transition, acknowledging that they may face multiple additional forms of oppression and harm and require tailored supportive measures [18].

A systematic review of energy justice scholarship highlights that the literature primarily uses its frameworks in a top-down manner to assess energy projects and provide recommendations for "traditional policy elites" ([17], p15). This orientation towards policy elites is considered a core strength that distinguishes it from more political frameworks, such as environmental and climate justice [19]. Moreover, in a recent perspective paper, some energy justice scholars have argued against the need for a body of literature that studies decentred voices and social movements struggling against neoliberalism [20]. Consequently, there is a risk that the energy justice literature diminishes the space for diverse and decentred perspectives. This diminishing of decentred voices and energy visions may result in the energy justice literature advocating for energy policies that aren't recognisable as just or equitable by diverse social groups.

Fortunately, a special issue has critically analysed the tension between expert and citizen-led approaches to energy justice [21]. One

paper in the issue studied indigenous resistance against the Trans Mountain pipeline expansion project (TMX) in Canada, revealing how the participants' conceptions of energy justice directly challenged neoliberal energy governance and the foreclosure of subaltern energy futures [22]. In another, Shehabi and Al-Masri [23] developed and studied a Citizen Assembly on energy justice in Lebanon against the backdrop of a failing state and collapsed fossil fuel infrastructures, highlighting how expert-centric and incumbent regime approaches to future-making deny the possibility of energy justice for some and limit the imagination of energy justice for others. Technocratic decision-making processes privilege experts' values and normative commitments at the expense of citizens, which is a risk that the energy justice literature faces unless it broadens its empirical base to include diverse and decentred voices.

In the UK, energy justice scholars have explored decentred voices by empirically studying its Community Energy (CE) sector [2–5]. This research has highlighted the CE sector's ambivalent role in enacting energy justice practices. CE groups enact distributive and procedural justice by rescaling decision-making and redirecting profits to community initiatives, such as community cafes and childcare provisions [2]. However, these energy justice practices are limited by the sector's lack of inclusion and recognition justice practices. As a result of austerity, the UK's CE sector has become overwhelmingly white and middle-class [24]. This demographic shift has led to CE groups developing community-scale renewable energy projects in ethnically diverse and working-class communities without proper consultations, resulting in some accusations of exploitation [5].

However, two significant gaps exist in this CE energy justice literature. Firstly, it has focused primarily on local enactments of energy justice without considering sectoral dynamics and institutional differences between CE groups and CEIs. Additional empirical evidence is necessary to understand whether intermediaries may have distinctly different values and visions of energy justice than CE groups, which are also likely to have heterogeneous priorities and perspectives. If they do, scholars and policymakers must consider how these differences impact policy recommendations. Secondly, the literature hasn't described CE visions for the UK's energy transition and how they relate to the UK's incumbent regime. Recent energy justice literature on struggles towards counter-hegemonic energy futures indicate that grassroots social movements contest dominant conceptions of justice and governance [22,23], but concrete empirical evidence on this issue for the UK's CE sector is currently absent.

### 2.2. Interpretive frame: sociotechnical imaginaries and critical niche perspectives

This paper draws on the sociotechnical imaginaries lens to empirically investigate decentred visions of energy justice. Sociotechnical imaginaries are "collectively held, institutionally stable, and publicly performed visions of desirable futures" ([10], p6). These visions of desirable futures are imbued with normative conceptions of the common good and become enmeshed within identities, institutions, and practices. Smallman [12] highlights how UK civil servants held an elite sociotechnical imaginary of 'science to the rescue' and shaped policy-making processes to structurally separate or exclude ethics or citizens' concerns. Consequently, the sociotechnical imaginary was self-reinforcing and institutionally stable since it enforced a common-sense understanding of how technoscientific policy-making should work and diminished the space for alternative views [12]. This is a critical feature of sociotechnical imaginaries: actors whose values and preferences align with an imaginary create institutional mechanisms that shape the norms of others.

However, not all actors can stabilise imaginaries equally: political economies and access to institutional resources shape whether and how actors can contest each other to make their visions dominant [11]. Governments can often unilaterally use policy documents and official

announcements to institutionalise an imaginary, thus shaping policy choices and innovation pathways [11]. Meanwhile, the private sector and non-governmental organisations often engage in coalition building to advocate for a particular set of policies and technologies that align with their interests [25]. Nevertheless, alternative social formations usually resist dominant imaginaries and push for their visions of desirable futures. Grassroots energy collectives may do this by organising public demonstrations or workshops [11], while more powerful organisations may engage in counter-coalition building [25].

This paper focuses on decentred and diverse energy visions, so it draws on the critical niche perspective (CNP) lens to explore energy visions that are marginal even within decentred spaces. Smith et al. [9] developed the CNP lens following an empirical study of the CE sector, which revealed that many people within the sector harboured views and commitments that challenged both the incumbent energy regime and the prevailing discourse about the CE sector as a niche that needed to scale before becoming embedded within the incumbent regime. The standout feature distinguishing CNPs from imaginaries is that CNPs aim to unsettle prevailing discourses without performing immediate material solutions, often because their supporters lack institutional resources [9]. Consequently, combining the sociotechnical imaginaries and CNP lenses allows this paper to explore and describe energy visions that vary in dominance and centredness.

### 2.3. Empirical case: the United Kingdom's community energy sector

The UK's CE sector emerged as a grassroots-led sector that aimed to influence sustainable energy transitions with initiatives on renewable energy generation, behavioural change, and energy efficiency [1]. The sector has its roots in community-oriented environmental projects that developed in the 1970s, with the first community-owned renewable energy projects developed in the late 1990s [9,26]. However, national policymakers largely ignored the sector until the 2010 coalition government emerged and developed a national CE strategy to support its growth [8,9]. This 'third wave' period was influential in institutionally stabilising the CE sector [9]. New legislation enabled CE groups to adopt not-for-profit business models, such as Community Benefit Societies, that embed community control and benefits into their legal structures [4]. Moreover, multiple Community Energy Intermediaries (CEIs) were founded during this period and have become pivotal for the sector's development [7,8]. These CEIs aggregate knowledge, upskill CE groups, and advocate for policy positions [7,8]. Therefore, they likely play a significant role in shaping CE visions and practices.

WPI Economics [27] modelled the potential of the CE sector to contribute to the UK's energy transition between 2020 and 2030, given a supportive policy environment. The modelling suggested that the CE sector could grow to 20 times its size, power 2.2 million homes with renewable energy, add £1.8 billion to local economies, create 8700 jobs, and save 2.5 million tonnes of CO<sub>2</sub> emissions per year [27]. It also indicated that community solar schemes would be the cheapest way to decarbonise the UK power sector [27]. Meanwhile, a longitudinal study of decentralised energy initiatives indicated that CE initiatives are more likely to persist than public or private sector alternatives since they respond to community interests rather than policy instruments, such as feed-in tariffs [28]. Additionally, Lacey-Barnacle and Nicholls [29] compared CE, public, and private energy initiatives through a governance lens and found that the CE legal company structures enabled a far greater degree of citizen participation than the public and private counterparts. As a result, CE projects typically received much greater public support in local planning applications [29], thus making them a favourable option for implementing community-scale renewable energy.

The CE sector is unlikely to fulfil the potential forecasted by the WPI Economics [27] report. Although the UK government considered decentralisation energy policies during its peak interest in the CE sector in 2014, it has since returned to favour a centralised decarbonisation

model [28]. In the aftermath of the Conservative's electoral victory in 2015, the government disbanded the Community Energy Unit and prioritised local enterprise partnerships: collaborations between local authorities and the private sector [6]. Moreover, the government removed its various support mechanisms for the CE sector, making it harder for people to set up and sustain a viable CE group [6]. The growth of new CE organisations fell by 81 % between 2016 and 2018 [30]. Meanwhile, incumbent energy firms have successfully lobbied against policy decisions that would reduce their market share to benefit the CE sector [31], thus capturing the UK's energy transition and contesting alternative energy futures. This shift away from 'community energy' in government policy indicates two potential strategies for the CE sector. The first is to intensify political advocacy in the run-up to the next general election, while the second is to prioritise capacity building across the sector. Both of these strategies are under the CEIs' institutional remit, making the analysis of their visions and goals a salient issue for strategy.

The removal of CE support mechanisms under the 2015 Conservative government, coupled with the coalition government's austerity measures, has also dampened the CE sector's ability to be genuinely communal since certain social groups have a greater capacity to participate in and influence CE projects [24]. Therefore, more affluent communities can capture the CE sector's benefits and deepen existing inequalities [32]. This dynamic is evident in Lacey-Barnacle's [5] study of CE groups in Bristol, wherein white middle-class CE members build community-scale energy projects in low-income and ethnically diverse neighbourhoods without including them in decision-making processes or adequately sharing community funds with them. Strong parallels exist between the CE sector and the UK's environmental movement on this issue of exclusion, with the latter failing to engage social groups beyond the white middle classes [33]. Interviews with POC and working-class people indicate that they understand the problem of underrepresentation in environmental politics in recognition injustice terms rather than procedural injustice [34]. In particular, they have argued that environmental movements don't recognise the conditions of marginalised communities and the webs of oppression they face [34]. Consequently, Bell and Bevan have argued that environmental movements must go 'Beyond Inclusion' and undergo a systematic transformation [34].

There is a lack of empirical data to indicate whether the CE sector is becoming more responsive to the needs and values of POC and working-class communities. Nevertheless, the CE sector is undergoing a significant shift in material practices. According to the 2021 State of the Sector report, which surveyed 220 CE organisations, CE groups increasingly prioritise net-zero and a just transition [35]. As such, many CE groups are moving away from focusing on renewable electricity generation towards whole system approaches, "tackling fuel poverty and demand reduction, and exploring innovative business models" [35 p2]. This shift may be partly due to the landscape changes in energy discourse, although the 2022 State of the Sector Report suggests that this shift might also be due to the removal of feed-in-tariffs [36].

### 3. Methods

This research is based on a discourse analysis of semi-structured qualitative interviews with 15 CE groups and 5 CEIs from England, Wales and Scotland. The participants' names have all been pseudo-anonymised at source. Appendix A: Table 2 presents the pseudo-anonymised participants alongside descriptions of their organisations, which have not been named. Most CE groups were increasingly moving towards whole-system approaches, aligning with the 2021 State of the Sector Report's findings [35]. Therefore, the CE group sample appeared to reflect the CE sector. However, there were crucial differences between the CEIs within the sample. The three national-scale CEIs (see Appendix A: Table 2) intensively analyse the energy landscape and liaise with government bodies and energy stakeholders for policy advocacy. Therefore, these three CEIs are likely most crucial to mobilising support

for the CE sector and institutionally stabilising its energy visions.

The interview and discourse analysis research methods were performed concomitantly so that each method could inform the other. Once the energy visions took shape in the data, the author analysed them according to the insight that visions become imaginaries through “the allocation of resources and the adoption into practices of making, governing and doing” ([37], p226). This allowed the author to distinguish the sociotechnical imaginaries from the CNPs, with the latter focusing on discourse rather than practices.

Two limitations restrict the empirical and theoretical contributions of this paper. Firstly, the empirical research was conducted within a small time frame, so the results are a relatively static snapshot of CE visions and practices at a particular point in time. The author mitigated this by interviewing participants with varying experiences within the sector to understand whether and how CE visions and practices have evolved. Nevertheless, these visions and practices are likely in flux and will continue to evolve as the UK’s energy transition develops. Secondly, the sample only included participants actively engaged within the CE sector since the research focused on how the sector understood energy justice. However, future research could extend the sample to include incumbent energy actors, CE project customers, residents, and other social movement actors. This could enable a better understanding of how diverse actors produce, stabilise, or resist energy justice articulations and performances in a messy, unfolding, and entangled space.

**4. Results**

Two core imaginaries emerged from the data analysis: an ‘Alternative Economy’ imaginary and a ‘Just Transition’ imaginary. This section discusses these CE imaginaries, highlighting how CEIs mobilised resources for each vision and how these visions shaped CE energy justice practices and outcomes, before detailing the nuances between the two imaginaries. The section then describes the only CNP that emerged from the data: Beyond Inclusion. Table 1 represents an overview of these three energy visions.

**Table 1**  
Energy visions summary.

Energy vision	Description	Energy justice	Performances
Alternative Economy imaginary (AE)	Scale up the CE sector to replace the neoliberal energy regime and support local and democratic economies	Procedural, Distributional	Community benefit funds, Shareholder voting, Locally-sourced procurement and employment, Local electricity bill policy advocacy
Just Transition imaginary (JT)	Design and implement a transition programme to support those left behind by the UK’s energy policy	Recognition, Distributional	Tariff advice, Hardship funds, Innovative electricity and heat systems, Targeted grants, Local electricity bill policy advocacy
Beyond Inclusion CNP (BI)	Challenge the CE sector’s claims to represent communities by drawing attention to its lack of ethnically diverse and working-class constituents	Recognition, Procedural	Internal diversity surveys, Inequality data sets, Science education workshops

**4.1. Alternative economy**

The dominant energy vision the interview participants articulated was the Alternative Economy (AE) imaginary: an energy vision that aims to prefigure a decentralised energy future. The AE imaginary was most strongly supported by the representatives of the three national-scale CEIs and the interviewees who had worked in the CE sector for the longest. Many participants whose values and preferences aligned with AE wanted to work in the renewable energy industry but were uncomfortable with its corporate nature, so they joined the CE sector because of its cooperative models and associations with democracy. This rationale was exemplified by Kelvin’s description of his CE group’s mission: “Our model is energy for the people.” These participants entered the CE sector with pre-existing beliefs about the need to replace the neoliberal energy regime, which created a sense of attachment and belonging to AE and, in turn, reinforced it. Consequently, the AE imaginary is durable and has shaped the CE sector throughout its development.

The participants articulated the AE imaginary to explicitly contest the UK’s dominant neoliberal energy regime, linking energy injustices to capitalism, the close ties between incumbent energy firms and policy-makers, and the government’s centrally-driven market-oriented energy policies. Milo, a member of a CE group, said that Ofgem and UK energy regulation has “rigged [the energy sector] towards big monopolies.” Several others made similar statements, decrying the captured political interests at the heart of the incumbent energy regime: the partnership between energy regulators and private energy firms. Moreover, private developers reportedly have easy access to finance and can develop projects unconstrained by geography, limiting the CE sector’s opportunity for growth. For example, Sarah, who has two decades of experience working in CE groups, said that several of her group’s projects were curtailed midway through the planning process because private firms could offer landowners large sums of cash upfront. Consequently, CE groups must often navigate precarity as they develop energy projects.

Relatedly, AE advocates stated that many dominant energy companies are foreign-owned and disregard consumers or local communities. They claim that the incumbent energy industry’s agenda is profit-driven resource exploitation, with some participants linking their activities to historical land injustices in parts of Wales and Scotland. In particular, Suzie, who works for a national-scale CEI, argued that the industrial revolution was built on the backs of low-wage Welsh labourers who risked their lives working in coal mines. However, private industrial giants expropriated all the wealth, while Welsh communities endured mass unemployment when the government closed the mines. Alongside pointing to the future, the imaginary historicised energy justice. Suzie sees the same dynamic of capitalist expropriation within the UK’s clean energy transition and hopes the CE sector can rectify this.

Therefore, the AE imaginary responded to deep distributional and procedural justice concerns within the UK’s neoliberal energy regime. Moreover, participants believe that the energy regime is not accountable to communities and makes decisions “in the interests of corporate profit,” as Suzie puts it. In response, the participants whose values and preferences aligned with AE believed that the CE sector is advancing energy justice by encouraging community-led ownership and governance of local assets.

Fig. 1 below describes how AE shapes energy justice practices. CE groups and CEIs engage in procedural and distributional justice activities to respond to perceived injustices in the incumbent energy regime. These dimensions sometimes act independently of each other but are often mutually reinforcing.

The performative starting point for the AE imaginary is often procedural justice: local stakeholders of the various CE groups may vote at the annual general meetings, and volunteers or boards of directors lead

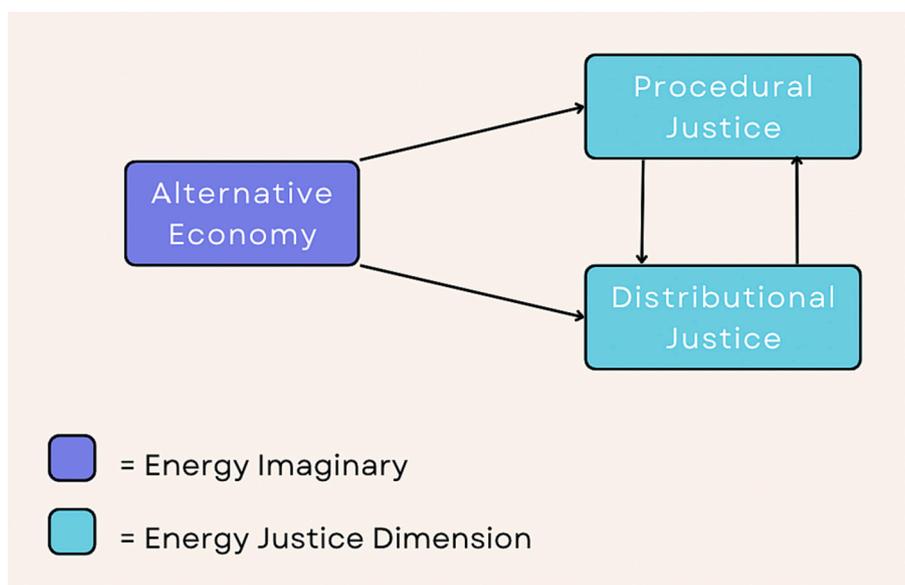


Fig. 1. Alternative economy energy justice.

project governance. However, few AE-only<sup>1</sup> advocates considered different social groups' capacities to participate in the CE sector, which the literature forewarned would lead to the exclusion of poor communities [24]. Moreover, most CE groups appeared to be shareholder co-operatives, whereby only people who have invested shares in the organisation could vote, with only one participant saying that their group was a consumer cooperative and enabled consumers to vote too. The democratic differences between the two organisational models are vast, yet participants rarely discussed the subject. Instead, AE-only advocates idealised concepts such as 'local' and 'community' and obfuscated differences between and within communities. As a result, the AE imaginary's lack of recognition justice severely limits the extent of its procedural justice outcomes.

The participants more fully developed the distributional justice dimensions of AE. Primarily, CE groups advance distributional justice through their community benefit funds: legally mandated money that many CE groups must distribute to benefit their local communities. Referring to her CE group, Danielle states that "every year, we have to report that we're doing something for community benefit." Moreover, CE groups can make decisions to benefit local economies, connecting distributional justice to procedural justice. For example, Suzie notes that CE groups "own the assets ... [and] can prioritise local companies," and Colleen suggests that local employment means that "people are spending that money locally."

Consequently, AE advocates position the CE sector as inherently just and an ideal alternative to the incumbent energy regime, with participants indicating that energy justice outcomes will naturally follow from the organisational rules embedded within CE groups. This is likely because AE performances stabilised during the CE sector's third wave [9], during which the CEIs formed and CE groups instituted themselves as Community Benefit Societies. Discussions of precise energy justice practices are remarkably absent within AE. As a result, its advocates believe that the policies that can advance energy justice are those policies that can scale up the CE sector. Interestingly, this emphasis on achieving scale mirrors traditional economic logic, although it aims to maximise community values rather than capitalism's profit motive.

However, the AE imaginary and the CE sector's scale are severely

curtailed by the 'supplier hub model': a regulatory structure for the energy marketplace that inhibits small-scale actors from selling energy locally. The groups whose values align with the AE imaginary are mobilising resources to push forward the 'local electricity bill' in parliament to fight this. Through this policy advocacy, backed strongly by four CEIs, participants hope to sell electricity to local households and reduce dependency on incumbent energy providers, thereby improving the sector's economic viability. However, as Sarah notes, "the whole market is set up by the big incumbents ... the opposite of what they want is an energy local bill." Therefore, the ability to achieve AE policy victories appears small.

#### 4.2. Just transition

The interview participants articulated a second energy vision: the Just Transition (JT) imaginary, which centres on innovative socio-technical models to deliver fair access to technologies, community resilience, and social welfare during the UK's energy transition. For example, John, who works for an energy transition intermediary, sees the role of the CE sector to deliver "a just transition ... in the sense that everybody should be able to have access to energy." Moreover, the participants who articulated JT were acutely aware that the UK's energy transition requires novel technologies, new forms of collaboration, and whole-systems thinking. This energy vision most closely reflects the 2021 State of the Sector survey [35] and may become increasingly dominant. Moreover, the discursive dimensions of JT appear to have developed in conjunction with emergent UK energy policy and CE groups' experiences in providing services for vulnerable communities. Consequently, newer CE groups articulated the JT imaginary more than the AE imaginary, while only one of the three national-scale CEIs articulated it.

To achieve a just transition, the JT imaginary is structured around recognition justice: the energy justice dimension that centres on the needs of marginalised or vulnerable groups. Predominantly, people raised fuel poverty as a core concern, with low-income communities and the elderly being the associated groups that were 'recognised'. For example, Zack, who gives energy advice to low-income communities, said that the "pricing setup is a bit predatory ... to take advantage of people," highlighting the distributionally unjust impacts on vulnerable groups. James, who also runs the energy advice service for his CE group, contextualised this injustice by discussing a family of Syrian refugees in fuel poverty. The family faced disproportionately high energy bills and

<sup>1</sup> The use of 'AE-only' distinguishes between those participants whose norms aligned with and were shaped only by the Alternative Economy imaginary and those participants who also held other imaginaries simultaneously.

had to choose between substandard household heating or poverty, which posed serious health concerns for the young children. These stark realities that many fuel-poor households face thus drive many CE groups to foreground recognition justice in their values and preferences.

Additionally, certain CE groups highlighted the specific needs of rural regions. Elena, who leads her CE group’s work with rural communities, said, “I suppose we need a better understanding from government that ... rural areas are different to cities.” Several participants claimed that neither the government nor private energy firms have transition strategies for rural homes dependent on oil heating and too poorly insulated for air-source heat pumps. For example, James and Elena noted that many rural communities are susceptible to energy system shocks, such as when oil prices rise. Consequently, the households often have to forego heating, which can prove deadly during winter. In response, JT advocates argue that vulnerable groups, rural and fuel poor, need targeted support: a core aspect of recognition justice [18]. Some communities may require access to relevant green technologies, while others may require entirely new strategies.

Fig. 2 below describes how JT shapes energy justice practices. Responding to the lack of recognition justice in UK energy policy, CE groups and CEIs foreground the needs of marginalised and excluded groups to achieve distributional justice.

Addressing what Zack described as the “predatory” pricing system, CE groups performed JT primarily through energy tariff advice initiatives, often working with low-income households, the elderly, and families with English as an additional language. Moreover, many groups have dedicated projects for helping people with fuel poverty that go beyond energy. For example, Kelvin’s group offers community services to assist people with poor mental health and provides support and advice to tackle non-fuel aspects of poverty. Similarly, Elena’s group raises money for a hardship fund to assist poor households in buying domestic goods. Consequently, these CE groups reveal the potential energy justice outcomes of a local economy that stands for recognition justice. This indicates that JT performances can complement and enhance AE performances.

However, the most widespread way CE groups performed the JT imaginary was through innovative sociotechnical models, often taking ‘whole-system’ approaches to incorporate electricity, heat, and storage. These projects aim to deliver self-resilient heat and power systems for marginalised customers, helping them decarbonise, reduce energy bills, and have a more comfortable standard of living. Although there are differences in how CE groups design these projects for rural households and urban fuel-poor households, the core principles of recognition justice and innovation remain. Moreover, this form of JT performativity also leads to its sectoral mobilisations: one addressing a new challenge, the other brushing against an ongoing problem.

Danielle and Zack cited the same organisation giving their groups grants to design their whole-system projects, though participants also mentioned other organisations. Danielle said of her group’s project that

“the only way to get funding for [the] project” was to be socially and technologically innovative. The grant-giving organisation declined their first proposal, but the second proposal was accepted when they decided to design a heat pump and storage project for an elderly housing estate. These grant-giving organisations sustain and perpetuate the JT imaginary by tying these grants directly to sociotechnical innovation and recognition justice. Significantly, these organisations are mobilising support for JT to advance targeted recognition justice practices rather than sectoral growth, in contrast to the AE imaginary’s sectoral mobilisation.

Furthermore, the two imaginaries share a significant hurdle: the ‘supplier hub model’. Danielle “wanted to find a way of sharing our electricity with” households in a deprived neighbourhood, but market regulations currently prohibit this. Therefore, Danielle and several other CE members are pushing for the local electricity bill to enable JT practices. However, there’s a subtle difference. AE advocates want to break up the supplier hub model so that the CE sector can achieve scale, with distributional and procedural justice outcomes extending from this. JT advocates want CE groups to have more choice over whom they share electricity with to prioritise recognition justice concerns.

Crucially, none of the three national-scale CEIs directly mobilised resources for the JT imaginary, though there may be scope for strategic action. For example, Elena mentioned a county council report that stated that the CE sector offers a better return on investment than the private sector, providing more social and environmental benefits. Therefore, Elena asserts that the government should fund CE groups to perform JT activities. This assertion highlights a potential policy advocacy avenue that CEIs could push for, though it does not seem to be on the national-scale CEIs’ radars yet.

#### 4.3. Drawing boundaries

For an energy vision to become an institutionally stable imaginary, it must mobilise resources and shape decision-making processes [13,37]. The two imaginaries did this by locating critical problems within the broader energy regime, presenting the CE sector as a possible solution, structuring CE activities to reflect the ideal type visions of the sector, and mobilising resources throughout the sector to make the visions a reality. However, they did so differently: the AE imaginary presented the CE sector as a solution to deep and ongoing distributional and procedural injustice concerns within the broader energy regime, while the JT imaginary presented the CE sector as a solution to the recognition justice issues that are emerging during the UK’s energy transition.

However, it must still be shown that the two imaginaries are not different sides of a larger imaginary. The author’s familiarity with the interview data attuned them to potential mismatches between participants’ discourse and my interpretations of the two imaginaries. Consequently, participants were asked to reflect on the imaginaries, thus enabling the author to test the interpretations against the participants

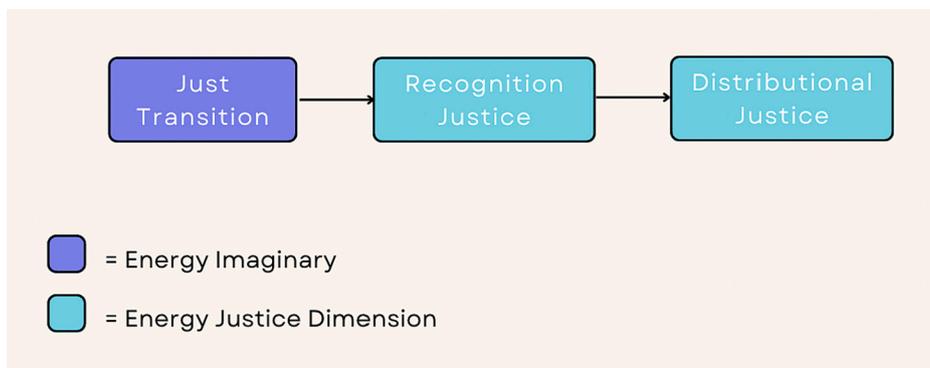


Fig. 2. Just transition energy justice.

and elucidate any nuances.

Debra, who joined her CE group following a career in finance, saw the benefits of local and community-led approaches to delivering resilience and reaching out to vulnerable communities, but she did not envision the need for an alternative economy. Instead, she said, “there is a role for business ... it can be a brilliant handshake.” Her view mirrored the perspectives of other JT-only participants who believed that big business and citizens could do more to assist the energy transition but had no concerns with capitalism or the energy industry itself. These participants aligned with the norms in JT but contested the norms of AE, defending private developers and finance. This ethos fits with the ‘Big Society’ vision of the 2010 coalition government that supported the CE sector’s third wave: an idea that was simultaneously curtailed in practice by austerity [9,24]. Therefore, while critiques of capitalism and the incumbent energy regime were not a necessary feature for the JT imaginary, they may be vital to achieving a just transition.

Suzie, who articulated the AE imaginary and was firm on her anti-capitalist beliefs, knew that many groups her CEI represented were pro-business. On the other hand, she said that she did not think about fuel poverty particularly often. Similarly, many other AE-only advocates spoke in great depth about the economy and energy industry yet neglected to mention specific communities, let alone vulnerable ones. Sarah, who aligned with the AE and has worked in the CE sector for two decades, suggested a possible reason: she believed that the AE imaginary was foundational for the CE sector in its early days. Therefore, some AE-only advocates may have formed a stable and durable set of norms and understandings before the energy transition became a matter of concern. That said, there is a crucial distinction between the two camps: while many JT-only participants contest the logic of the AE, AE-only advocates are primarily ambivalent to the JT imaginary in that they ignored it rather than contested it.

Nevertheless, many participants presented both imaginaries, directly linking capitalism and the incumbent energy regime to fuel poverty and recognition justice issues. Danielle did this by blaming the privatisation of energy industries for the rise in fuel poverty, while James suggested that private multinationals care more about extracting profit than protecting vulnerable communities. Moreover, Stuart, who works for a quasi-governmental CEI, showed how the imaginaries linked with each other positively: “[CE] people do not give up ... somebody in [an incumbent energy firm] would just put it in the too hard to worry about [category].” Similarly, but in more absolute terms, Oliver, a member of a CE group, said that it was possible to have an alternative economy without a just transition, but that a just transition needed local not-for-profit governance. Some truth to this statement can be seen in the JT performances that built on the CE sector’s position within local economies, such as the mental health services and community hardship funds. This suggests that a CE imaginary combining AE’s structural critiques with JT’s recognition justice practices may enable the CE sector to develop its energy justice performances more fully.

#### 4.4. Beyond inclusion

When pushed to consider the white and middle-class demographic that primarily constitutes the CE sector, most participants regretted the situation. However, only two interviewees, who engaged in activism outside the energy sector with ethnically diverse and working-class communities, articulated an energy vision around the CE sector’s demographic problem. This vision, the Beyond Inclusion CNP, emphasises the need for community-led agendas and community knowledge while simultaneously unsettling the taken-for-granted notions of ‘community’ within AE, in line with critical niche theory [9]. BI highlights the need for the CE sector to acknowledge its diversity issues and the needs and voices of marginalised social groups, namely working-class and POC communities. Bethany, who recently joined her CE group, mentions both of these aspects of BI, saying that “local doesn’t necessarily always mean good” and “understanding the everyday lives of a community [is] a part of recognition justice.” This vision resembles many CE academics’ warning that affluent communities and professionals may dominate the CE sector [24,32].

As with the preceding imaginaries, BI also responds to identified problems. However, the BI CNP located problems squarely within the CE sector itself rather than with the broader energy regime. The first problem is a ‘who’ concern. BI is worried by the apparent dominance of white, middle-class professionals within the CE sector, which other participants acknowledged as a characteristic of the CE sector. Moreover, BI problematises the ‘community’ in CE further by challenging the structural dynamics of CE groups: Bethany noticed that many CE groups are shareholder-owned, so the democratic potential of these groups is primarily extended to individuals with the capacity to become shareholders rather than the wider community. This is particularly troubling, considering it can entrench inequalities within the CE sector by locking-out low-income communities.

The second problem that BI identifies combines ‘what’ and ‘how’ concerns. Gary, who runs a CE group that prioritised the needs of working-class and POC communities, claims that the CE sector has a “white middle-class agenda” that does not reflect the needs of marginalised groups or the forms of knowledge they possess. Gary links this to the first problem, rhetorically asking the CE sector, “how demographically buyable is your claim to represent people?” Bethany agrees with these concerns, especially regarding how local knowledge and values are involved in decision-making processes. Moreover, she takes this line further to challenge the motivations and power dynamics involved when CE groups engage with marginalised groups. Bethany says, “it seems to me [CE groups] are often doing community engagement as a means to an ends. Right, it’s an instrumental rationale ... to achieve social acceptance.”

Fig. 3 below describes how the BI CNP shapes energy justice discourses, practices, and perspectives. Responding to the perceived injustices in the CE sector, the vision puts forward an alternative energy justice roadmap that starts with recognising who has been impacted by

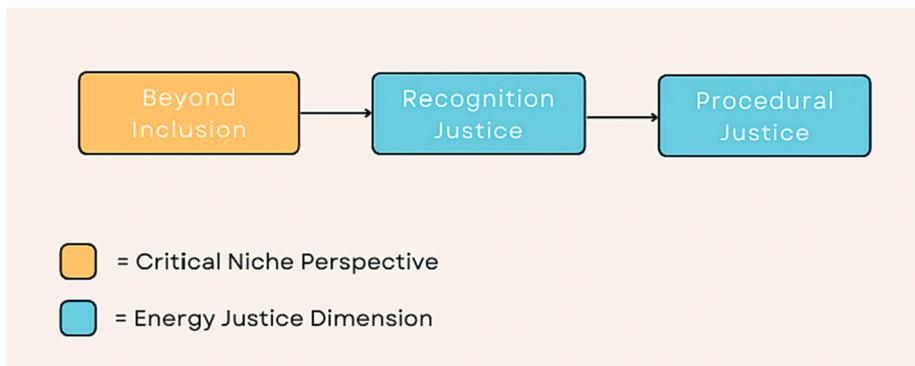


Fig. 3. Beyond inclusion energy justice.

the energy regime and excluded from participation within the CE sector, then centring their needs and values in agenda-setting and decision-making. This mirrors some of the insights in Bell and Bevan's [34] paper, as the CNP demands more than mere inclusion within the CE sector. Significantly, the contest between BI and AE is not one of identity politics versus structural critiques of capitalism. If anything, the BI CNP disavows the co-option and instrumentalisation that can come with identity politics and the performative inclusion of some marginalised people without significant change. Instead, BI longs for the CE sector's transformation: into a sector recognising that some communities suffer from additional structural harms.

BI's performativity is nascent: several groups are conducting similar activities to address these energy justice concerns, but they are few and far between. Bethany performed a diversity, equity, and inclusion analysis of her CE group as a precursor to future inclusivity initiatives. Gary's group constructed demographic data sets to highlight energy and pollution inequalities. These initiatives aim to develop detailed information regarding the state of the CE sector and impacted communities so that the CE groups may better tailor their activities to reflect the needs of marginalised communities. Additionally, Gary's group has coordinated with other community groups from their local area to set up a science education workshop for POC kids. This initiative aims to educate and empower vulnerable and excluded children so that working-class and POC groups can lead the CE agendas of the future.

However, there is currently a lack of sectoral mobilisation for this vision, so it has not become institutionalised into an imaginary. In other words, there has yet to be institutional support from CEIs to cement and perpetuate the vision throughout the CE sector, thus limiting the possibility for others in the sector to draw on and be shaped by these norms and values. One CEI member personally shared elements of this vision, but none of the CEI groups diverted resources to support it.

## 5. Discussion

This section analyses the paper's core findings in three ways: it addresses the CEIs' role in stabilising the imaginaries, proposes hypotheses for the relationship between energy visions and energy justice practices and discourses, and reflects on the three energy visions and how they open our understanding of energy justice.

### 5.1. The role of community energy intermediaries

The national-scale CEIs, perhaps the most vital intermediaries for the CE sector's robust development, skew heavily towards the AE imaginary. This skew may be a legacy of the CE sector's earlier shift: as the CE sector institutionalised, it had to distinguish itself from the private energy sector. Simultaneously, the national-scale CEIs were founded during this period of CE sector institutionalisation [9]. This likely led to the national-scale CEIs, the codification of CE groups' organisational structures, and discourses around the CE sector's position as an alternative to private energy companies becoming institutionally tied to each other. Consequently, the nation-scale CEIs have stabilised the AE imaginary and circulated it throughout the CE sector and beyond, thus shaping how CE newcomers and incumbent regime actors make sense of CE.

In contrast, the national-scale CEIs did not mobilise resources to stabilise or perpetuate the JT imaginary despite the research data suggesting that CE groups skew towards it. Therefore, there appears to be a slight imaginary misalignment. This misalignment could be a temporal characteristic, as there may not have been sufficient time for JT norms and knowledge practices to feed upwards to the CEIs. In this case, the JT imaginary may increasingly dominate across the CEIs within the next few years, particularly as the CE groups' material practices shift [35,36]. Simultaneously, this weak misalignment indicates that CE groups can develop a shared vision throughout the sector without top-down facilitation from CEIs, despite their fundamental role according to the

literature [7]. Indeed, landscape changes such as the energy transition and climate activism may be more critical than CEIs in shaping sectoral imaginaries.

The CE literature highlights how CEIs mobilise resources at a sectoral level and provide practical support at a group level, while the socio-technical imaginaries level suggests that a cohesive imaginary requires an alignment in practices and institutional support. The CEIs used language that indicates they may be sympathetic to JT values, so they could likely be convinced to leverage their network relationships and organisational capacities to advance JT programmes. If so, CEIs could perform nationwide Energy Justice Maps to assess various regional and social groups' energy justice needs or design Participatory Recognition Justice Assessment programmes to facilitate the co-creation of a JT knowledge commons, whereby CE groups could annually self-report their just transition progress. These programmes could orient the national-scale CEIs' expertise and resources to aggregate and strengthen the CE sector's JT knowledge, capacities, and best practices.

None of the five CEIs supported the BI CNP, thus curtailing its potential to become an imaginary. Significantly, BI responds to widely known issues of poor representation and inclusion in the CE sector, which authors have highlighted for a decade [24]. Therefore, this misalignment is not due to a lack of awareness by the CEIs. Consequently, it is unclear to what extent the CE members who support BI can mobilise resources to support it and transform governance practices within the sector. This shift may have to come from outside the CE sector, such as through broader landscape pressures on race and class. Indeed, while Gary's CE group articulated BI because of its members' positionality as ethnically diverse and working-class, Bethany joined her CE group following her engagement with a local Black Lives Matter group. This suggests that a BI-oriented intermediary may more likely emerge from Black Lives Matter or a similar grassroots social justice movement. Alternatively, a CE group that supports BI may have to take on an intermediary role and organise capacity-building activities for the sector.

Comparing the relative institutional dominance of the three energy visions suggests a final question: Why did the JT imaginary stabilise throughout the sector when the BI CNP did not? Two possibilities are apparent. The first is that the transition-focused CEI and the grant-giving organisations, as cited by Danielle and Zack, were enough to stabilise and circulate JT discourses and practices, indicating a diversity of institutional authority within the CE sector. The second is that elements of the JT imaginary are more widespread in mainstream discourse in the UK, while aspects of the BI CNP are still marginal despite the prominence of the Black Lives Matter movement. Indeed, both these possibilities appear likely, though it is unclear which may be more consequential. Regardless, this difference highlights the asymmetrical nature of forming and circulating energy visions, with more-decentred energy visions, such as the BI CNP, facing a more challenging road to achieving institutional stability.

### 5.2. How energy visions shape energy justice

The data indicate two nested hypotheses about the relationship between energy visions and energy justice, although future research is needed to test them. The first hypothesis is that energy visions and energy justice discourses and practices recursively shape each other. The data from the AE imaginary and the BI CNP strongly suggest that the concerns and desires at the core of each vision formed first, with the energy justice discourses and practices emerging afterwards. The data from the JT imaginary is less clear: the vision appeared to emerge from CE experiences during the UK's energy transition, but there was no decisive indication of whether JT values or JT discourses and practices developed first. Overall, this suggests that the energy visions shape material commitments first, though it is intuitive that one's pre-existing practices would shape future visions. Neither exists within a vacuum, so they will likely co-constitute each other. However, this paper's research

design could not concretely ascertain this temporal dynamic, so future research is suggested in Subsection 5.4 to address this limitation.

The second hypothesis is that energy visions give structure to energy justice discourses and practices. All of the energy visions presented in this paper encoded a specific set of energy justice discourses and practices that mapped onto the critical dimensions within the visions. Moreover, the JT imaginary and BI CNP seemingly structured these discourses and practices according to prioritisation sequences, as represented in Fig. 2 and Fig. 3. Advocates of the JT imaginary used recognition justice language to locate the vulnerable communities at the heart of their strategies, then experimented with sociotechnical innovations to reduce the harm these communities face. Similarly, advocates of the BI CNP argued that marginalised groups are typically excluded from CE decision-making processes, then engaged these groups and their knowledge in ways that distributed agency to them. In both cases, recognition justice was prioritised first.

The three energy visions also represent distinct positions on a stability spectrum. The AE imaginary and its corresponding discourses and practices have been fixed for a considerable time, with few people iterating on them. The JT imaginary has stabilised a set of discourses and practices, such as the hardship funds and heating systems, but there is more scope for innovation as the imaginary responds to an evolving sociotechnical landscape. Meanwhile, the BI CNP has few distinctive practices since it focuses on destabilising the prevailing discourse within the CE sector about its claims to represent communities. Although BI has shaped some CE practices, these will likely evolve since the energy vision has not become institutionally stabilised. Additionally, the BI's energy justice structure could develop to include distributional justice if it became an imaginary, mobilising resources to address the specific structural harms that marginalised communities face.

### 5.3. Diverse visions of just futures

The presence and diversity of these energy visions and their associated understandings of energy justice reveal how energy justice discourses and practices come with distinct normative commitments, are situated within specific social, technical, and political contexts, and contest alternative conceptions of energy justice. Newcomers into the CE sector are not equally likely to develop attachments and belongings to any energy vision as they bring their pre-existing values and beliefs, constraining the potential energy visions they can align with and, thus, the energy discourses and practices they articulate and perform. This can be seen by considering how neither Debra nor Bethany supported the AE imaginary. Debra believed in the potential for the private sector to deliver a just transition, having entered the CE sector shortly after a career in finance, and quickly dismissed the notion that an alternative energy regime was necessary. Meanwhile, Bethany's involvement in the Black Lives Matter movement made her deeply sceptical about the CE sector's claim to represent communities. Consequently, Debra and Bethany deeply contested the core beliefs within the AE imaginary, though from starkly different political stances.

However, the future is not static or closed, and the unfolding dynamics between them (and visions not yet made or revealed) can still generate multiple possible futures. Despite the significant differences between the three energy visions, they could combine in the future to form a new dominant CE imaginary. This combined imaginary could develop its institutional practices to support local economies and not-for-profit governance and centre the voices and needs of marginalised communities in both its decision-making processes and its material commitments. Nevertheless, there are clear barriers to this specific future, such as the values of the CE members who directly contest the alternative visions, such as Debra with AE. If the combined imaginary were ever to develop, new imaginaries or CNPs would likely emerge in response to it.

The energy visions presented within this paper also confirm the insights in Castillo Jara and Bruns' [22] and Shehabi and Al-Masri's [23]

papers: that non-elite social groups conceive of energy justice as inextricable from energy governance. This poses a challenge for the energy justice literature, which primarily produces policy-relevant advice for incumbent energy governance actors. While the energy justice literature has made considerable strides in inserting equity concerns into energy research and policy-making, the diversity of energy justice interpretations presented within this paper, alongside their political and often antagonistic natures, reveals how subjective and contestable energy justice is. Therefore, the author recommends that energy justice scholars engage deeply with the diversity of energy justice values and interpretations within society more broadly to understand whether different social groups consider the academic community's conception of a just transition as one for them.

## 6. Conclusion

This paper drew on the conceptual lenses of sociotechnical imaginaries and critical niche perspectives to explore how CE groups and CEIs understand issues around energy justice. Three visions of just energy futures emerged from the data with varying degrees of institutional prominence. These visions revealed an uneasy landscape wherein diverse actors from across the CE sector and beyond are committed to specific understandings of energy justice and are competing to make theirs dominant. Systemic inequalities and hierarchies within the UK's energy system and the CE sector shape how and why these energy justice visions formed alongside their prospects for institutional stability.

A dominant and institutionally stabilised Alternative Economy imaginary framed the CE sector as inherently just in opposition to the incumbent energy regime. Participants who articulated this vision argued that the critical issue with the existing energy system is that private sector firms and market-oriented regulators have politically and economically captured it. CE groups have stabilised this imaginary by formalising procedural and distributional justice practices, such as annual general meetings and community benefit funds. These groups aim to prefigure an alternative economy and governance arrangement for the UK's energy system, supported by national-scale CEIs that engage in policy advocacy to scale the sector. Meanwhile, an emergent Just Transition imaginary framed the CE sector as more proactive in seeking energy justice than the incumbent energy regime. Participants who articulated this vision argued that private sector firms and government policy either don't have the intention or capacity to address income-based and place-based inequities. CE groups develop this imaginary by tailoring their energy projects to centre recognition and distributional justice practices, supported by intermediary organisations that directly fund just transition activities. These imaginaries are mutually compatible, and many held both. However, significant differences existed regarding some people's perceptions of capitalism and its role in the energy system, thus limiting the possibility of a shared sectoral energy vision.

The third energy vision that emerged from the data was the Beyond Inclusion critical niche perspective. Unlike the two imaginaries, this vision challenged the CE sector itself, highlighting how CE groups and CEIs use idealised notions of community and democracy to achieve legitimacy despite failing to address the sector's exclusionary character. The CE sector is overwhelmingly white, educated, middle-class, and shareholder-run. Two interview participants with experiences in anti-racist movements and groups highlighted how this demographic issue means that the CE sector doesn't adequately represent the needs of marginalised social groups, thus tying recognition justice and procedural justice together. These participants advocate for a future where low-income and ethnically diverse communities have a greater voice in the CE sector. However, none of the interviewed CEIs currently support this vision. This vision's prospect for achieving institutional stability highlights how systemic inequalities and institutional hierarchies still play a significant role in supposedly grassroots and democratic participatory spaces.

Two implications follow from this paper for future research and practice. Firstly, the data highlights how energy justice discourses and practices are situated within particular sociotechnical and sociopolitical contexts, shaped by preexisting and emergent normative commitments, and contest alternative articulations and performances. Moving forward, scholars should engage more deeply with energy justice conflicts and explore whether and how the literature can support practices antagonistic to incumbent governance actors. Secondly, the Beyond Inclusion critical niche perspective suggests that practitioners and policymakers must develop new methods to support marginal visions that don't uncritically rely on strengthening intermediaries. This support may include supporting CE groups that are frontrunners on these issues, collaborations and knowledge transfers with alternative social movements, and a broader transformation of the CE sector. Future research should examine the opportunities and challenges involved in attempts to make the CE sector more responsive to decentred voices.

## Appendix A. Table 2

**Table 2**  
Interview participants.

Pseudonym	Organisation description
Danielle	A CE group that develops solar power projects and is shifting towards heat and energy storage projects.
Kelvin	A CE group that has developed several solar power projects, offers energy advice, and is developing heat, energy storage, and digitalised energy projects.
Colleen	A CE group that builds solar power projects and eco homes.
Gary	An environmental justice group that focuses on working class and POC inclusion.
James	A CE group that has developed several solar power projects, offers energy advice, and is developing heat, energy storage, and digitalised energy projects.
Oliver	A CE group that focuses on renewable energy generation projects.
Zack	A CE group that focuses on energy advice and may be shifting towards heat projects.
Brandon	A rural CE group that aims to achieve community resilience by developing renewable energy generation, heat, and energy storage projects.
Elena	A CE group that has developed solar power projects, offers energy advice, and aims to ensure that rural communities don't get left behind.
Bethany	A CE group that has developed solar power projects, offers energy advice, and aims to ensure that rural communities don't get left behind.
Sarah	A CE group that has developed several renewable energy generation projects.
Milo	A CE group that develops solar power projects and is shifting towards heat and transportation projects.
Debra	A CE group that develops solar power projects and offers energy advice.
Kim	A CE group that focuses on renewable energy generation projects.
Maria	A CE group that has developed several solar power projects, offers energy advice, and is developing heat, energy storage, and digitalised energy projects.
Duncan	A national-scale CEI that helps CE groups with best practices and facilitates access to government grants.
Heather	A national-scale CEI that helps CE groups with best practices and engages in policy advocacy.
John	An energy transition intermediary that also assists the CE sector with energy and policy analysis.
Suzie	A national-scale CEI that helps CE groups with best practices and engages in policy advocacy.
Stuart	A quasi-governmental CEI that helps CE groups with best practices and allocates government grants.

## References

- [1] G. Seyfang, J.J. Park, A. Smith, A thousand flowers blooming? An examination of community energy in the UK, *Energy Policy* 61 (2013) 977–989, <https://doi.org/10.1016/j.enpol.2013.06.030>.
- [2] A. Forman, Energy justice at the end of the wire: enacting community energy and equity in Wales, *Energy Policy* 107 (2017) 649–657, <https://doi.org/10.1016/j.enpol.2017.05.006>.
- [3] M. Lacey-Barnacle, C. Bird, Intermediating energy justice? The role of intermediaries in the civic energy sector in a time of austerity, *Appl. Energy* 226 (2018) 71–81, <https://doi.org/10.1016/j.apenergy.2018.05.088>.
- [4] M. Lacey-Barnacle, Exploring Local Energy Justice in Times of Austerity: Civic Energy Sector Low-Carbon Transitions in Bristol City, PhD Thesis, Cardiff University, 2019, <http://orca.cardiff.ac.uk/id/eprint/124530>.
- [5] M. Lacey-Barnacle, Proximities of energy justice: contesting community energy and austerity in England, *Energy Res. Soc. Sci.* 69 (2020) 101713, <https://doi.org/10.1016/j.erss.2020.101713>.
- [6] P. Devine-Wright, Community versus local energy in a context of climate emergency, *Nat. Energy* 4 (11) (2019) 894–896, <https://doi.org/10.1038/s41560-019-0459-2>.
- [7] T. Hargreaves, S. Hielscher, G. Seyfang, A. Smith, Grassroots innovations in community energy: the role of intermediaries in niche development, *Glob. Environ. Chang.* 23 (5) (2013) 868–880, <https://doi.org/10.1016/j.gloenvcha.2013.02.008>.
- [8] G. Seyfang, S. Hielscher, T. Hargreaves, M. Martiskainen, A. Smith, A grassroots sustainable energy niche? Reflections on community energy in the UK, *Journal of Environmental Innovation and Societal Transitions* 13 (2014) 21–44, <https://doi.org/10.1016/j.eist.2014.04.004>.
- [9] A. Smith, T. Hargreaves, S. Hielscher, M. Martiskainen, G. Seyfang, Making the most of community energies: three perspectives on grassroots innovation, *Environment and Planning A: Economy and Space* 48 (2) (2015) 407–432, <https://doi.org/10.1177/0308518X15597908>.
- [10] S. Jasanoff, S. Kim, *Dreamscapes of Modernity*, University of Chicago Press, Chicago, 2015.
- [11] L.L. Delina, Whose and what futures? Navigating the contested coproduction of Thailand's energy sociotechnical imaginaries, *Energy Res. Soc. Sci.* 35 (2018) 48–56, <https://doi.org/10.1016/j.erss.2017.10.045>.
- [12] M. Smallman, **Nothing to do with the science?": How an elite sociotechnical imaginary cements policy resistance to public perspectives on science and technology through the machinery of government**, *Soc. Stud. Sci.* 50 (4) (2019) 589–608, <https://doi.org/10.1177/0306312719879768>.
- [13] N. Longhurst, J. Chilvers, Mapping diverse visions of energy transitions: Coproducing sociotechnical imaginaries, *Sustain. Sci.* 14 (4) (2019) 973–990, <https://doi.org/10.1007/s11625-019-00702-y>.
- [14] D. McCauley, R. Heffron, H. Stephan, K.E.H. Jenkins, Advancing energy justice: the triumvirate of tenets and systems thinking, *International Energy Law Review* 32 (3) (2013) 107–116, <https://research-repository.st-andrews.ac.uk/handle/10023/6078>.
- [15] R. Sidortsov, B. Sovacool, Left out in the cold: energy justice and Arctic energy research, *J. Environ. Stud. Sci.* 5 (3) (2015) 302–307, <https://ideas.repec.org/a/spr/jenvss/v5y2015i3p302-307.html>.
- [16] R.J. Heffron, D. McCauley, The concept of energy justice across the disciplines, *Energy Policy* 105 (C) (2017) 658–667, <https://ideas.repec.org/a/eee/enepol/v105y2017icp658-667.html>.
- [17] K.E.H. Jenkins, B.K. Sovacool, N. Mouter, N. Hacking, M.-K. Burns, D. McCauley, The methodologies, geographies, and technologies of energy justice: a systematic

- and comprehensive review, *Environ. Res. Lett.* 16 (4) (2021) 043009, <https://doi.org/10.1088/1748-9326/abd78c>.
- [18] B.K. Sovacool, M. Martiskainen, A. Hook, L. Baker, Decarbonization and its discontents: a critical energy justice perspective on four low-carbon transitions, *Clim. Chang.* 155 (4) (2019) 581–619, <https://doi.org/10.1007/s10584-019-02521-7>.
- [19] K. Jenkins, Setting energy justice apart from the crowd: lessons from environmental and climate justice, *Energy Res. Soc. Sci.* 39 (2018) 117–121, <https://doi.org/10.1016/j.erss.2017.11.015>.
- [20] S. Droubi, R.J. Heffron, D. McCauley, A critical review of energy democracy: a failure to deliver justice? *Energy Res. Soc. Sci.* 86 (2022) 102444 <https://doi.org/10.1016/j.erss.2021.102444>.
- [21] T. Krüger, E. Eichenauer, L. Gailing, Whose future is it anyway? Struggles for just energy futures, *Futures* 142 (2022) 103018, <https://doi.org/10.1016/j.futures.2022.103018>.
- [22] E. Castillo Jara, A. Bruns, Contested notions of energy justice and energy futures in struggles over Tar Sands development in British Columbia, Canada. *Futures* 138 (2022) 102921, <https://doi.org/10.1016/j.futures.2022.102921>.
- [23] A. Shehabi, M. Al-Masri, Foregrounding citizen imaginaries: exploring just energy futures through a citizens' assembly in Lebanon, *Futures* 140 (2022) 102956, <https://doi.org/10.1016/j.futures.2022.102956>.
- [24] P. Catney, S. MacGregor, A. Dobson, S. Hall, S. Royston, Z. Robinson, M. Ormerod, S. Ross, Big society, little justice? Community renewable energy and the politics of localism, *Local Environ.* 19 (7) (2014) 715–730, <https://doi.org/10.1080/13549839.2013.792044>.
- [25] K.L. Christiansen, W. Carton, What “climate positive future”? Emerging sociotechnical imaginaries of negative emissions in Swede, *Energy Res. Soc. Sci.* 76 (2021) 102086, <https://doi.org/10.1016/j.erss.2021.102086>.
- [26] T. Brauholtz-Speight, S. Mander, M. Hannon, J. Hardy, C. Mclachlan, E. Manderson, M. Sharmina, The Evolution of Ccommunity Energy in the UK, 2018. Available at: [https://pure.manchester.ac.uk/ws/portalfiles/portal/77541622/Brauholtz\\_Speight\\_et\\_al\\_2018\\_Evolution\\_of\\_community\\_energy\\_in\\_the\\_UK.pdf](https://pure.manchester.ac.uk/ws/portalfiles/portal/77541622/Brauholtz_Speight_et_al_2018_Evolution_of_community_energy_in_the_UK.pdf).
- [27] WPI Economics, *The future of community energy*. [online], Available at: <https://wpieconomics.com/site/wp-content/uploads/2020/01/Future-of-Community-Energy-20200129-Web-Spreads.pdf>, 2020. (Accessed 9 November 2023).
- [28] Y. Rydin, C. Turcu, Revisiting urban energy initiatives in the UK: declining local capacity in a shifting policy context, *Energy Policy* 129 (2019) 653–660, <https://doi.org/10.1016/j.enpol.2019.02.054>.
- [29] M. Lacey-Barnacle, J. Nicholls, The role of ownership and governance in democratizing energy: comparing public, private, and civil society initiatives in England, *Energy Democracies for Sustainable Futures* 131–142 (2023), <https://doi.org/10.1016/b978-0-12-822796-1.00014-0>.
- [30] Community Energy England. (2020). *Community Energy: State of the Sector Report 2020*. [online] Available at: [https://communityenergyengland.org/files/document/484/1615989181\\_CommunityEnergy-StateoftheSector2020Report.pdf](https://communityenergyengland.org/files/document/484/1615989181_CommunityEnergy-StateoftheSector2020Report.pdf). [Accessed 9 November 2023].
- [31] M. Brisbois, Shifting political power in an era of electricity decentralization: rescaling, reorganization and battles for influence, *Environ. Innov. Soc. Trans.* 36 (2020) 49–69, <https://doi.org/10.1016/j.eist.2020.04.007>.
- [32] V. Johnson, S. Hall, Community energy and equity: the distributional implications of a transition to a decentralised electricity system, *People, Place and Policy Online* 8 (3) (2014) 149–167, <https://doi.org/10.3351/ppp.0008.0003.0002>.
- [33] K. Bell, *Working-Class Environmentalism: An Agenda for a Just and Fair Transition to Sustainability*, Palgrave Macmillan, London, 2020.
- [34] K. Bell, G. Bevan, Beyond inclusion? Perceptions of the extent to which extinction rebellion speaks to, and for, black, Asian and minority ethnic (BAME) and working-class communities, *Local Environ.* 26 (10) (2021) 1205–1220, <https://doi.org/10.1080/13549839.2021.1970728>.
- [35] Community Energy England. (2021). *Community Energy: State of the Sector Report 2021*. [online] Available at: [https://communityenergyengland.org/files/document/523/1624438045\\_UKSOTSReport.pdf](https://communityenergyengland.org/files/document/523/1624438045_UKSOTSReport.pdf). [Accessed 27 February 2023].
- [36] Community Energy England. (2022). *Community Energy: State of the Sector Report 2022*. [online] Available at: [https://communityenergyengland.org/files/document/626/1655376945\\_CommunityEnergyStateoftheSectorUKReport2022.pdf](https://communityenergyengland.org/files/document/626/1655376945_CommunityEnergyStateoftheSectorUKReport2022.pdf) [Accessed 27 February 2023].
- [37] A. Mager, C. Katzenbach, Future imaginaries in the making and governing of digital technology: multiple, contested, commodified, *New Media Soc.* 23 (2) (2021) 223–236, <https://doi.org/10.1177/1461444820929321>.