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From the "just transition" to the "trust transition": rethinking justice in community energy projects

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ABSTRACT

While there has been much interest in community energy (CE) within policy and academia, political interest and support have fluctuated in most European countries, depending on the political orientation of incumbent governments. To investigate some of the broader social benefits of CE, this paper uses insights from energy justice (EJ) research and empirical data from 12 semi-structured interviews with CE professionals, academics and volunteers in the UK. Three key benefits of CE are identified which have not been fully explored in existing literature, all of which are linked by the overarching concept of trust. Firstly, CE organisations often serve as "trusted intermediaries", offering trusted advice and support. Secondly, CE organisations were found to be well placed to engage with marginalised communities by building trust and offering energy poverty alleviation support. Thirdly, through trust, CE organisations can enhance linking social capital, providing a connection between local people and those in positions of authority. Overall, this paper advances theoretical understandings of EJ by identifying "informational justice" as a fourth tenet of EJ, distinct from distributional, procedural and recognitional forms of justice. More specifically, it identifies the provision of trusted information as foundational to achieving EJ, which has been underacknowledged in the literature. It concludes with suggestions for how CE initiatives can better engage with marginalised communities to avoid perpetuating socio-economic inequalities and broaden political support. Three key recommendations are identified: implementing a genuinely community-centred approach, embedding inclusive organisational practices, and creating diverse and accessible opportunities for engagement.

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Introduction

In the UK, the global energy crisis of 2022 resulted in many people struggling to heat their homes (Gardner and Gray 2024). The choice between "heating and eating" is associated with wider detrimental impacts on health and wellbeing (Jenkins, McCauley, and Forman

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2017; Liddell and Guiney 2015; Liddell and Morris 2010). As a result, access to affordable energy is one of the key justice issues that we face today (Walker and Day 2012). In England alone, 3.17 million people live in energy poverty, equating to 13% of all households (Department for Energy Security and Net Zero 2024a).

Additionally, the persistent reliance on an energy system based on fossil fuels significantly contributes to the climate crisis, and the UK's emissions from energy remain substantial (IPCC 2022). However, the need to decarbonise the energy system is being increasingly recognised, with the UK government publishing their Clean Power Action Plan in December 2024 (Department for Energy Security and Net Zero 2024b). This allows for an opportunity to reshape how we interact with, understand and manage energy.

Over the last few years, there has been a burgeoning interest in decentralised, community-led energy (Boostani, Pellegrini-Masini, and Klein 2024). Community energy (CE) refers to initiatives where communities collectively develop, own and benefit from local renewable energy projects or energy efficiency measures, often aiming to enhance sustainable energy, social equity and engagement with local people (Seyfang, Park, and Smith 2013). In addition to energy generation and energy efficiency projects, CE also encompasses energy advice initiatives and fuel poverty alleviation support (Boostani, Pellegrini-Masini, and Klein 2024). Despite historically unfavourable policies for the CE sector in many countries, including the UK, there has been much interest – from both governments and researchers alike – in the potential benefits it can bring (Bielig et al. 2022; Brummer 2018; Lowitzsch, Croonenbroeck, and Novo 2024).

Historically in the UK, governmental support for CE has been particularly inconsistent (Braunholtz-Speight et al. 2020; Nolden, Barnes, and Nicholls 2020). Recently, however, there has been increasing political interest in the sector alongside wider commitments to the transition to net zero (Department for Energy Security and Net Zero 2024b; Skidmore 2023). Although traditionally CE initiatives have predominantly taken the form of energy generation projects, in recent years CE has been evolving towards playing additional supportive roles, most notably with a focus on providing energy advice, retrofitting and energy efficiency measures (Community Energy England 2022). These dimensions of CE – all of which hinge critically on building trust between citizens and wider components of the energy system – have been less well studied compared with traditional energy generation projects. Nonetheless, a fair and just transition to net zero will require much greater emphasis on such solutions (IPCC 2022; Skidmore 2023).

CE schemes are often lauded for their ability to generate renewable energy and provide financial benefits for local communities (Braunholtz-Speight et al. 2020; Brummer 2018; Nolden, Barnes, and Nicholls 2020). However, limiting evaluations of CE initiatives to these benefits risks overlooking the broader socio-political value that they can provide (Barnes et al. 2024). In this time of renewed political interest in CE on one hand and growing societal distrust on the other, it is important to more fully understand some of the benefits and potential of CE, including the roles it can play in contributing towards energy justice (EJ) alongside net zero. If CE is viewed solely in terms of the amount of renewable energy it generates or the carbon it saves, then it could be argued that it is faring quite poorly compared with large-scale commercial projects (Nolden, Barnes, and Nicholls 2020). However, there are a

myriad of other benefits that often come along with CE initiatives that have been touched on in the literature but not explored in much depth. Often, these co-benefits – including CE's "role in achieving just transitions" (Creamer et al. 2019, 1) and its wider contributions to enhancing "the democratic governance of energy resources" (van Veelen 2018, 645) – are intangible and difficult to capture, measure or codify (Barnes et al. 2024).

Theoretically, this paper draws on the energy justice (EJ) framework, which provides a robust means of exploring dimensions of equity, fairness and social justice (McCauley et al. 2013). Within renewable energy and CE discourse, there has been a long-standing emphasis on the scientific and technical dimensions of projects, with a detachment from social justice dimensions (Atkins 2023; Bickerstaff, Walker, and Bulkeley 2013). However, understanding social dimensions is an important step towards more fairness and equity within the energy transition and within CE specifically. Research has shown a lack of diversity within CE projects and a lack of engagement with underrepresented or marginalised groups, which risk reproducing existing social and economic inequalities (Bode 2022; Hanke and Lowitzsch 2020; Radtke and Ohlhorst 2021; Tarhan 2022; Yildiz et al. 2015). It has also been highlighted that there is a distinct lack of literature on what CE initiatives can do to be more inclusive, diverse and equitable (Bode 2022). By focusing on the practices used by CE projects to build trust with citizens, this paper contributes directly to filling these gaps while also providing some practical recommendations based on insights from CE practitioners and researchers.

Much of the previous research on CE has centred on volunteer-led CE generation projects rather than more formalised CE organisations. In the UK, many of the formalised CE organisations have paid staff and often have a fuel poverty alleviation branch of their work rather than solely focusing on energy generation (Nolden et al. 2022). This paper, therefore, builds on existing literature by including actors who are involved in formal CE organisations (such as paid staff members or Directors) as well as researchers, not just volunteer-led groups.

This piece of research takes a qualitative approach, deriving insights from 12 semi-structured interviews conducted to understand the perspectives and worldviews of a range of people involved in the UK CE sector. It seeks to contribute new understandings of the wider benefits of CE, beyond renewable energy generation and income creation itself, by answering the following two research questions:

1. What is the role of trust in determining the success of community energy initiatives?
2. How can "trust" in community energy delivery contribute to addressing social and economic inequalities?

The remainder of this paper is structured as follows. Section 2 covers the methodology, introducing first the theoretical framework of EJ before giving further details on the qualitative approach that was used, the sampling method, limitations and how the data was analysed. Following this, section 3 presents the key findings. Section 4 provides a discussion of the key themes identified from the interviews, making links with the literature. Finally, in section 5, the conclusions and practical recommendations are set out, and suggestions for future research are put forward.

Methodology

This paper aims to understand how EJ is understood and advanced by those involved in CE initiatives. To achieve this, a qualitative research methodology based on semi-structured interviews was chosen. A qualitative approach enables in-depth, rich and nuanced understandings of complex and subjective experiences that are often harder to capture through quantitative research methods (Bryman 2022).

Theoretical framework

Energy justice (EJ) offers a robust framework for understanding the connections between social justice issues and the energy system (Jenkins et al. 2016; Jenkins, McCauley, and Forman 2017). It has its roots in climate justice (Walker and Day 2012), highlighting strategies which might be useful to enhance fairness within the sharing of benefits and burdens in the energy sector (Jenkins, McCauley, and Forman 2017). Beyond aiming to promote a more equitable sharing of these benefits and burdens, EJ also advocates inclusive participation in energy decisions and especially the representation of marginalised and vulnerable people, such that a diverse range of needs and identities are understood and respected (Sovacool et al. 2017; Sovacool and Dworkin 2015).

The existing approach to EJ identifies three key tenets: distributional justice, procedural justice and recognitional justice (Walker and Day 2012; McCauley et al. 2013; Jenkins et al. 2016; Sovacool and Dworkin 2015). These are expanded on in Table 1 (see also McCauley et al. 2013).

Data collection

This research was given ethics approval by the School of Geographical Sciences Research Ethics Committee at the University of Bristol (approval number 18868). Participants were recruited using purposive and snowball sampling. People who had expertise or involvement in the chosen study topic were selected (Bryman 2022). Snowball sampling was used to recruit additional participants through referrals from interviewees. Two of the authors' employment by active CE organisations, Bristol Energy Network and Community

Table 1. The three tenets of energy justice (adapted from Walker and Day 2012; McCauley et al. 2013; Sovacool and Dworkin 2015; Jenkins et al. 2016; Heffron and McCauley 2017; Hanke, Guyet, and Feenstra 2021; Bode 2022).

Distributional justice	Refers to equity in how access to affordable energy, and the wider benefits and burdens of the energy system, are distributed, regardless of demographics such as class, race or gender. This tenet is typically discussed around energy poverty (McCauley et al. 2013).
Procedural justice	Refers to equity in how energy decisions are made, and who is involved in, or can influence, decision-making (McCauley et al. 2013). For some scholars, this includes access to information about energy (Bode 2022; Sovacool and Dworkin 2015) and opportunities to challenge decisions (Walker and Day 2012).
Recognitional justice	Involves recognising and respecting the rights, identities, experiences, needs and desires of diverse people and groups in diagnoses of energy injustice (Jenkins et al. 2016; Walker and Day 2012). For some scholars, this component also includes restorative justice, aiming to amend historic injustices (Heffron and McCauley 2017).

Energy Pathways, facilitated the identification of key people involved in the CE sector. Data was collected via 12 semi-structured interviews with academics and practitioners involved in CE, all of whom consented to be interviewed and agreed to have associated research data published. The table below provides a reference for the interviewees cited throughout the paper (Table 2).

Semi-structured interviews are a well-established method for understanding specific viewpoints and worldviews in detail rather than gaining a representative sample of public opinion, for example, via a survey (Adeoye-Olatunde and Olenik 2021). Semi-structured interviews give a clear structure but also allow for clarification and detailed elaboration on participants' understandings and perspectives (Adams 2015; Bartholomew, Henderson, and Marcia 2000). Open-ended questions enable the exploration of detailed perspectives of key stakeholders. The interviews lasted between 35 and 70 min, with an average length of 55 min. Due to the scope of the study, research participants were professionals and experts in the CE sector, rather than marginalised or vulnerable people or those with lived experience of energy poverty.

Data analysis

The interview transcripts were thematically analysed and coded using the qualitative data analysis software NVivo (Version 14). This is a useful way to categorise and organise key ideas within the data in a structured manner. It involves identifying parts of the data that are connected into themed codes (Gibbs 2007). Notes were taken for each code to capture reflections during the process of thematic analysis to keep track of ideas and enhance the consistency of the codes (ibid). A process that combined deductive and inductive coding was used to pull out key themes, this is referred to as a "hybrid" approach to coding (Fereday and Muir-Cochrane 2006, 80).

Initial coding was undertaken using a deductive approach to establish key themes relating to the theoretical framework and the literature. Following this, a second round of coding was undertaken using an inductive approach to derive additional themes from the data, irrespective of existing theories or ideas. These themes were then synthesised and condensed to create a final set of themes to structure the analysis. This coding process was undertaken separately for both research questions, as can be seen in Tables 3 and 4.

Table 2. The 12 interview participants with a brief description of their role, location and date.

Number	Interviewee	Date
#1	Academic, Oxford	10/07/2024
#2	Academic, Sheffield	01/07/2024
#3	Practitioner, Bristol 1	26/06/2024
#4	Practitioner, Bristol 2	04/07/2024
#5	Practitioner, Bristol 3	17/07/2024
#6	Practitioner, Bristol 4	08/07/2024
#7	Practitioner, Bristol 5	08/07/2024
#8	Practitioner, Bristol 6	27/06/2024
#9	Practitioner, Bristol 7	24/07/2024
#10	Academic, Bristol 1	11/07/2024
#11	Academic, Bristol 2	27/06/2024
#12	Practitioner, Cornwall	17/07/2024

Table 3. Key themes from the analysis of research question 1 (RQ1) – "What is the role of trust in determining the success of community energy initiatives?".

RQ1: What is the role of trust in determining the success of community energy initiatives?		
Deductive themes	Inductive themes	Final themes for analysis
1. Energy poverty alleviation support 2. Information and advice on energy and retrofit 3. Acceptance and understanding of low-carbon energy and retrofit 4. Economic and social benefits for local communities 5. Citizen participation in energy issues 6. Community engagement work	1. Trusted intermediaries 2. Trusted advice and support: (a) Energy poverty support (b) General energy advice 3. Embedded in the community 4. Marginalised communities: (a) Listen to local people (b) Understand local energy concerns and solutions (c) Provide social and economic benefits (d) Outreach in disadvantaged areas 5. Trust and linking social capital	1. Trusted intermediaries 2. Trust within marginalised communities 3. Linking social capital

Table 4. Key themes from the analysis of research question 2 (RQ2) – "How can "trust" in community energy delivery contribute to addressing social and economic inequalities?"

RQ2: How can "trust" in community energy delivery contribute to addressing social and economic inequalities?		
Deductive themes	Inductive themes	Final themes for analysis
1. Recognitional justice: (a) Culture and communication (b) Internal / organisational practices (c) Understanding needs 2. Procedural justice: (a) Collaborations and partnerships (b) Diverse opportunities for engagement (c) Designing with the community 3. Distributional justice: (a) Sharing of the benefits irrespective of engagement (b) Good governance (c) Financial accessibility 4. Challenges: (a) Understanding needs can be hard (b) Lack of funding (c) Can be extractive	1. Community activators 2. Cultural differences, communication, and language 3. A guiding framework based on equity and justice 4. EDI training for staff 5. Inclusive recruitment practices 6. Understanding needs and barriers to engagement 7. Diverse collaborations and partnerships 8. Diverse and accessible opportunities 9. Challenges: constrained by time and money	1. A genuinely community-centred approach 2. Inclusive organisational practices 3. Diverse and accessible opportunities for engagement

Limitations

Two of the authors' close involvement with CE organisations provided connections with key stakeholders, facilitating participant recruitment. It also enabled us to build rapport with interviewees and provided us with a good level of knowledge about the topic, both of which are beneficial when conducting semi-structured interviews (Adams 2015; Harvey 2011). Our "insider-outsider" perspectives within the CE sector (Dwyer and

Buckle 2009, 54) provided some distance from the topic; however, shared similar cultural understandings may have resulted in the reinforcement of a homogenous viewpoint. Additionally, the use of snowball sampling limited the diversity of perspectives of the research participants, and 9 out of 12 interviewees were based in Bristol. Efforts were made to reach out to a range of people involved in the sector, but we were limited to those who said yes to an interview and by the scope of the research. This will have limited the range of perspectives and insights that were gathered, and these findings may not be representative of CE initiatives in other cities, locations or contexts.

Community energy: a question of trust

One of the most prevalent themes emerging from the interview data was the unique role of CE initiatives as "*trusted intermediaries*" (#2; #3). Many interviewees acknowledged that CE organisations often act as trusted intermediaries between communities, local authorities and energy companies.

> Community energy is seen as a trusted intermediary … they often benefit from kind of more trust within communities to do stuff and speak the truth (#2).

Recognising their role as trusted intermediaries, many interviewees specifically stressed the importance of the trusted and impartial advice and support on energy issues that many CE organisations provide where other organisations fall short.

> Community energy has a role in providing impartial, reliable, high-quality advice, which is sorely missing (#4).

Interviewees saw the importance of CE organisations in providing "*clarity on terminology*" and "*transparency*" on many energy issues that are otherwise confusing or misunderstood, empowering people to make more informed energy decisions (#4). The role of CE organisations in providing trusted sources of information was seen as essential to regain, build and maintain trust with local people. The trusted advice provided by CE organisations was recognised by interviewees as taking many different forms, falling within two main categories. Firstly, impartial information and advice about low-carbon heating technologies and retrofit measures, and secondly, energy poverty alleviation support.

Additionally, it was noted that some previous energy projects that were led by local authorities with no involvement from CE organisations had gone "*really, really badly wrong, so much so that people will say, "I can't have solar on my house, I won't trust anyone to come into my house""* (#5). As trusted intermediaries, CE organisations were seen as essential for rebuilding trust in instances such as these. Interviewees also noted that due to being trusted intermediaries, CE organisations can enable "*more people to feel like they trust in the energy system*" (#6). This was seen to contribute towards creating "*a positive relationship with energy*" (#12). It was acknowledged that these benefits are "*difficult to measure and value*" but are nonetheless very important (#2).

In terms of the academic literature on CE and trust, this role of CE in increasing trust in renewable energy is in line with findings from the literature (Brummer 2018). Another paper found that trust is essential for the success of community renewable energy projects (Walker et al. 2010). However, the research on CE and trust does not specifically explore the role of CE organisations as trusted intermediaries. Walker et al. (2010) make

the important point that trust is not guaranteed and may vary widely depending on the context and conditions of the CE initiative (ibid). We cannot assume that trust is a guaranteed element of CE schemes as it will vary depending on the project, and trust must be consciously cultivated.

Regarding the idea of intermediary organisations, research carried out by Bird and Barnes (2014) showed the important role that intermediary organisations can play in scaling up community energy (Bird and Barnes 2014; Lacey-Barnacle and Bird 2018). However, their analysis does not engage with the concept of trust, and the specific role of CE organisations as trusted intermediaries is not investigated within their research. Building on this, the effectiveness of CE organisations as intermediaries is rooted in the trust that they can build and maintain within local communities. As more CE organisations move towards working on energy advice rather than solely energy generation projects (Community Energy England 2022; Skidmore 2023), this role of CE as a trusted intermediary may become more prevalent. More recently, as CE is expanding into a much wider range of energy advice provision, the issue of trust has gained prominence in CE sector publications (Nolden, Pendered, and Donghi 2023; Walker 2023; Nolden et al. 2024).

Trust within marginalised communities

Another theme that interviewees highlighted was that in their role as trusted intermediaries, CE organisations can be particularly effective at engaging with marginalised communities. Interviewees noted that the trust CE organisations had cultivated with local communities can be effective in reaching those who may otherwise be excluded from energy initiatives (Nolden, Rossade, and Thomas 2021). It was acknowledged that trust was especially important in areas where people have lost trust in local authorities and other services "*because of 15 years of austerity*" (#2). It was recognised that, in many contexts, CE organisations are "*generally trusted more by the local population than, say, the council is*" (#2).

Interviewees acknowledged CE's role in "*fuel poverty alleviation support*", supporting people to understand their bills and to understand what support and advice they may be eligible for (#3). This helps people to "*access the right services and offers that the market is giving to them",* which are often confusing to navigate (#6). Interviewees stressed that many people do not know what support is available to them, particularly those who are vulnerable or from disadvantaged backgrounds.

> There are many people in our communities who are disadvantaged and don't necessarily know what mechanisms are available to support them … things like access to retrofit grants or even access to energy support and bills support. (#10).

Two participants spoke about the mistrust around energy vouchers to illustrate this point. Vouchers were given out by energy companies to help those on prepayment metres with their energy bills during the height of the energy crisis. One of the participants had previously worked in an energy company and reported a lack of trust in this offer:

> We did want to give people vouchers, and they were even kind of distrustful of that, they didn't want them … they thought there were strings attached (#4).

Another interviewee explained that there is evidence of people "*not opening up the envelopes of those vouchers because they assumed they were bills, and they put them aside or threw them out*" (#10). This illustrates that those eligible for support, often the most vulnerable, may not utilise the help on offer due to a lack of trust. Interviewees highlighted that CE organisations can play an important role in providing trusted and impartial support to demystify the available help. Additionally, one interviewee noted that a CE organisation was able "*to reach out to recently arrived immigrant groups that are just baffled by the entire system and don't know whom they can trust*". Their electricity was being "*stolen … within a shared house*" (#2), and they were spending thousands of pounds a month on bills because they did not know the actual cost of their energy bills.

In their research on the civic energy sector, Lacey-Barnacle and Bird (2018) have made useful contributions to understanding the role that intermediary organisations play in enhancing energy justice. They found that intermediary organisations (such as CE organisations, local charities, local authorities and academic institutions) can help support fairer access to the benefits of CE projects. They found that intermediary organisations can be a bridge between local sustainable energy projects and marginalised groups, support these groups to access funding, and help keep the financial benefits of CE projects within local communities (ibid). Building on this work, as outlined above, interviewees explicitly noted that trust distinguishes CE organisations from other actors such as local councils. It was found that the concept of trust is an essential mechanism that enables CE organisations to act as intermediaries in a meaningful and impactful way, especially when engaging with marginalised communities.

Much of the literature on CE shows a lack of engagement with marginalised communities and a lack of diversity (Yildiz et al. 2015; Bode 2022; Brummer 2018; Hanke and Lowitzsch 2020; Radtke and Ohlhorst 2021; Tarhan 2022). Some interviewees, echoing findings in the literature (Bode 2022; Hanke and Lowitzsch 2020; Radtke and Ohlhorst 2021; Tarhan 2022, Yildiz et al. 2015), noted that a lack of diversity was something the "*sector was struggling with*" (#6). However, it was also noted that in terms of engagement with marginalised communities, the role of CE organisations as trusted initiatives enables them to engage well with these groups. It is important to note, however, that this may be limited to locations with strong and well-established CE organisations (Nolden, Rossade, and Thomas 2021; Torrens, Johnstone, and Schot 2018).

Linking social capital

Another key theme that was identified that links to the concept of trust was the role that CE organisations can play in "*linking social capital*" (#1). This was seen as being facilitated by their role as trusted intermediaries. Linking social capital refers to connecting community members with external resources or authorities (Claridge 2018). Interviewees noted that CE organisations can enhance the social relations between individual community members or groups and organisations in a position of authority or power.

> Linking social capital … they [CE organisations] are embedded within the community and they have the sort of skills and confidence and trust to reach out to external entities, such as the university or the local authority. (#1).

The linking social capital provided by CE organisations can enable communities to access power and resources that may otherwise be out of reach. This finding on linking social capital resonates with the work of Lacey-Barnacle and Bird (2018), who similarly identify the importance of intermediary organisations in facilitating connections between community groups and external institutions. One interviewee noted that facilitating linking social capital does not necessarily have to be done by CE organisations, and other organisations could play this role. However, when it comes to energy issues, CE organisations are well placed as they have the relevant expertise and knowledge (Coy, Malekpour, and Saeri 2021).

Trust and energy justice

Linking the theme of trust to the theoretical framework of energy justice (EJ), this paper argues that trust is integral in the pursuit of EJ. In the EJ literature, there is a distinct lack of emphasis on the importance of trust. Building on the ideas of trust outlined above, this section specifically outlines the importance of trusted information in the EJ framework. It argues for the incorporation of a new tenet of EJ called "informational justice". The role of trusted information is integral to achieving EJ, which is not fully explored or understood within the current literature. As illustrated in section 2, the EJ framework generally includes three tenets (Jenkins et al. 2016; McCauley et al. 2013):

1. Distributional justice: Fairness in the way the benefits and burdens of energy are distributed.
2. Procedural justice: Fairness within decision-making processes, influence and participation.
3. Recognitional justice: Acknowledging and respecting diverse people and communities and being representative of these communities.

Scholars such as Bode (2022, 6) propose that "access to information" sits within procedural justice. Similarly, Jenkins et al. (2016, 172) writes that "procedural justice requires meaningful participation as well as impartiality and full information". Although access to information is touched upon by these scholars, it is not sufficiently elaborated upon, and the need for this information to be trustworthy is not specifically mentioned.

Although it could be argued that "trusted information" should sit within procedural justice, this paper argues that "informational justice" warrants a tenet of its own. An EJ framework that includes informational justice encapsulates a more holistic understanding in line with the interview findings. Informational justice within the EJ framework refers to equitable access to trusted, accurate and reliable information on energy issues, which can lead to more informed and empowered citizens. Informational justice is a concept found within some literature on organisational, data and business ethics (Zapata, Olsen, and Martins 2013) as well as healthcare and medical ethics (Pérez-Arechaederra, Briones, and García-Ortiz 2024). However, it is a concept that has so far been absent in the energy sphere. See Figure 1 for this new conceptualisation of the EJ framework to include the fourth tenet of informational justice.

This paper argues that the availability of information on energy issues is not sufficient if it is not trusted and accessible, particularly in the context of marginalised or vulnerable

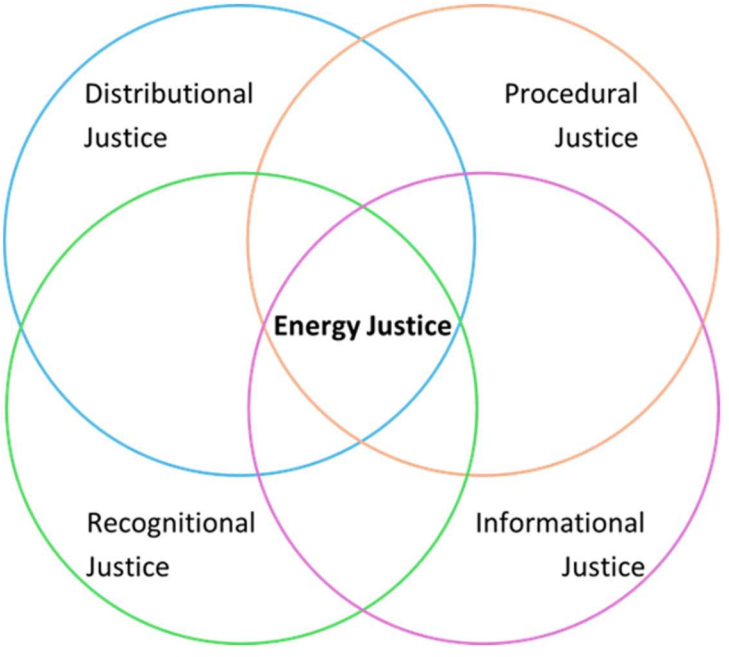

Figure 1. A four tenet framework of energy justice (EJ) to include informational justice.

people. Regarding distributional justice, without access to trusted information, the benefits are often not understood or accessed in a fair way (as was shown in the example above of unredeemed energy vouchers). Regarding procedural justice, without trusted information, people will not be equipped to advocate for their rights effectively or to have influence over decision-making processes. Regarding recognitional justice, without trusted information, people may struggle to understand or articulate their needs, concerns or aspirations. It is, therefore, argued that informational justice is a foundational element of EJ and has been underappreciated within the existing literature. Additionally, by acting as a trusted intermediary and being a source of trusted information, CE can make important contributions to enhancing EJ.

Embedding informational justice in practice

This section covers key themes that relate to research question 2, "How can "trust" in community energy delivery contribute to addressing social and economic inequalities?". It explores the interviewees' recommendations for how CE can enhance inclusivity, diversity and equity. The recommendations reflect some of the ideas found on inclusive practices within community development and community engagement literature (Freire 1978; Mayo 2000). However, as these ideas have not yet been written about in the context of CE, these findings add new contributions to the existing research. The three main themes that were identified are as follows:

1. A genuinely community-centred approach.

2. Inclusive organisational practices.
3. Diverse and accessible opportunities for engagement.

Due to their ethos of putting "*community over energy*" (#10), CE initiatives have a lot of potential to engage with marginalised groups, as has been explored in the previous section. However, the lack of diversity in CE that has been shown in previous literature can jeopardise meaningful engagement with underrepresented or marginalised people (Radtke and Ohlhorst 2021; Yildiz et al. 2015). For example, this may hinder their ability to engage with vulnerable people, disabled people, working class people, Black people or people of colour. In this context, this section outlines a series of practical suggestions from interviewees for how CE can build trust and embed informational justice to avoid reproducing social and economic inequalities.

A community-centred approach

To avoid reproducing existing inequalities, interviewees consistently stressed the importance of a genuinely community-centred approach. As one interviewee noted, "*[t]he way that you design and deliver your services needs to kind of genuinely be designed with the community*" (#4). Some interviewees emphasised that CE should prioritise community development work over renewable energy production. In the literature on CE, the focus is generally on renewable energy development rather than the role that CE can play in community development (Fernandez 2021; Fuentes González, Sauma, and Van Der Weijde 2019; Hanke, Guyet, and Feenstra 2021; Radtke and Ohlhorst 2021). This contributes to the existing literature by emphasising that community development could be a useful framing of CE, challenging the traditional focus on renewable energy generation.

Interviewees also underscored the necessity of mapping and understanding different needs within a community rather than assuming you know or assuming a one-size-fits-all approach. Research looking specifically at community-owned energy generation projects has long emphasised the important role of assessing local needs so that projects can be as relevant as possible (Walker and Devine-Wright 2008). However, not only is this important for making projects relevant, but it is also important for ensuring that a more diverse range of people are considered and engaged. Interviewees also highlighted the critical importance of designing CE projects with the community "*right at the start … even before they've decided what their project is*", rather than imposing pre-formed plans upon them (#6). These ideas, as mentioned above, are reflective of ideas arising in community development literature (Mayo 2000), and it can be argued that CE could have much to learn from this area of thought.

However, this approach is not without its challenges, interviewees noted the difficulties arising from funding often not factoring in engaging community members from the very outset of a project. There were also difficulties in accurately mapping and understanding diverse, hidden or transient community needs, whilst not wanting to be "*extractive*", especially given the lack of funding for such work (#3). This challenge of a lack of funding is a theme that has come up within other research on CE (Brummer 2018; Community Energy England 2024; Nolden et al. 2024; Nolden, Pendered, and Donghi 2023; Walker 2023).

In line with this, interviewees stressed the need for more funding to support more effective engagement with marginalised communities. Interviewees emphasised the important role of local partnerships and collaborations with organisations and individuals who are embedded within local, diverse communities. Giving them "*decision-making power*" within a project so that projects are genuinely "*co-produced*" was seen as important (#1). This suggestion is in line with findings from Hanke, Guyet and Feenstra's (2021) research on CE who also recognised diverse collaboration as a key strategy for engaging more underrepresented or marginalised people. Adding to these ideas in the existing CE literature, interviewees specifically suggested the importance of "*community activators*", which led to "*a rich, diverse group of champions*" (#5). Community activators were supported to connect with others in their community on energy issues, and they spoke about CE projects and energy issues with the communities in which they were embedded, inspiring action and learning:

> [W]e had] a Jamaican lady that had lived in the community for years … who had external wall insulation, had solar panels, ya know … . talking to her network of people because they knew [her] (#5).

This, too, is reminiscent of concepts found within community development literature and work such as Paolo Freire's Pedagogy of the Oppressed (Freire 1978; Mayo 2000). Freire recognised the importance of connecting with key community members or leaders who can mobilise and connect with others in their communities. His emphasis on dialogue and critical consciousness aligns with the idea of informational justice – ensuring that all communities, particularly those who are marginalised, have equitable access to information and the ability to meaningfully participate in decision making. Informational justice within CE projects requires that knowledge and resources are not only available but also accessible and framed in ways that diverse communities can resonate with and understand. Despite the best efforts to engage a diverse range of people and well-established community groups, interviewees also stressed the importance of acknowledging that no person or community group represents an entire community.

Inclusive organisational practices

Interviewees noted that embedding equity and justice within organisational practices is fundamental to ensuring that existing inequalities are not perpetuated. As one interviewee explained:

> Justice … has to be embedded in everything that you do and the way that you run your organisation (#4).

Specifically, it was emphasised that a justice-orientated framework can be used to inform every aspect of a CE organisation's work, from the project design and development to evaluation and daily operations. A concrete example of this was given by interviewees involved with one of the CE organisations in Bristol. An interviewee had been involved in a piece of work to develop the Just Transition Declaration (JTD) – a framework consisting of ten principles designed to support greater equity and justice within climate, nature and sustainability projects (Bristol City Council, 2022). This CE organisation has begun applying the JTD as a guiding framework to embed more inclusion and justice into its

project development and delivery. This has included adapting communications to use more accessible and relatable language, proactively making connections with underrepresented groups, and providing extra support to those facing barriers such as digital exclusion. Although there is a challenge in not necessarily having adequate resources to fund the time it takes to do this work and provide this extra support, it is something they are aiming to embed into more of their work. They also tracked the demographics of those they engaged in their programme, helping to identify gaps in engagement so they can work towards greater diversity. One of the interviewees noted that this was not only a useful framework for their CE organisation, but that Bristol City Council (BCC) had also designed one of their recent decarbonisation projects using the JTD. This resulted in BCC funding a paid Inclusion Associate to enhance the equity, diversity and inclusion of the project, illustrating a positive and tangible result of using this framework.

In addition to using structured frameworks such as the JTD, interviewees also emphasised the importance of regular and ongoing training to put this framework into practice and to sustain an inclusive organisational culture. Lastly, ensuring that recruitment practices are as inclusive as possible was noted as a key recommendation by interviewees.

Diverse and accessible opportunities and engagement

Lowering the investment threshold for community share offers was highlighted by interviewees so that it is "*easier to invest with smaller amounts of money*" (#6). From a distributional and procedural justice perspective, this argument aligns with previous research that has shown lower investment thresholds to be important in making CE generation projects more inclusive (Seyfang, Park, and Smith 2013). However, there is no research to suggest that this results in more diverse engagement within CE from different sectors of the community. Indeed, many interviewees also stressed that there first needs to be more effort to enhance the awareness of what CE is amongst more diverse groups – in short, that improved informational justice is essential if distributional and procedural justice gains are to be maximised.

Furthermore, interviewees noted that having multiple avenues for community engagement is important for encouraging broader community participation. Interviewees spoke about offering online and offline options for engagement, workshops at several different times and outreach at a diverse range of community events and locations. It was also noted that a key element of engaging more diverse people is to understand who is not coming and why; for example, perhaps travel or childcare are barriers. Understanding these barriers and making efforts to address them were noted as being of key importance. Not expecting people to come to you was also a recurring idea from interviewees: "*[w]*e've *been moving our meetings around the city, not expecting people to come to us*" (#5). Despite trying many of these techniques, it was noted that "*sometimes you … do the best you can, and people will still not come",* but making the effort was seen as very important (#6). Again, these findings reflect insights from community development literature that examine best practices for participatory approaches and inclusive community engagement (Cornwall 2008).

Interviewees noted the importance of "*meeting people where they're at*" (#3). They emphasised the necessity of using accessible and tailored communication with

different groups and using relatable language. A good approach was seen as grounding the benefits of CE projects in the immediate concerns of local people. For example, rather than focusing on carbon reduction, which can be a very abstract concept, it was suggested that the focus could be on how the project can reduce their bills, increase the financial resilience of the community or make people's homes warmer.

> Don't say, "hey, we're a community energy project" … say, "we're going to assess your home and help you to insulate it better" (#11).

Linking this theme of relatable communication to the EJ framework and the tenet of informational justice, a key aspect of informational justice should be that the communication is accessible, tailored and relatable (Middlemiss et al. 2024). The recommendation of making information relatable and tailoring it to local concerns echoes insights from the literature on how to effectively communicate climate change issues (Markowitz and Guckian 2018; Moser 2010).

Conclusion

This paper aimed to (i) explore the role of "trust" in community energy (CE) initiatives and delivery and (ii) to understand how trust in CE initiatives can avoid reproducing socio-economic inequalities and explore the role of CE in enhancing energy justice (EJ).

The findings show that CE initiatives play a vital role in enhancing trust. Firstly, CE organisations were found to be "trusted intermediaries" within communities. Many of the CE organisations in the study were found to provide trusted and impartial energy advice and information where other organisations lacked a reputation for doing so. In turn, this was seen as creating a more positive relationship with the energy system, such as renewable and low-carbon energy technologies. The identification of CE organisations as trusted intermediaries is a significant finding that adds a new dimension to existing academic analyses of the benefits of CE. It should also be noted, however, that a CE organisation's ability to enhance trust is not a given, and trust needs to be proactively developed and maintained.

Secondly, our analysis has found that CE organisations are generally well placed to engage with marginalised and vulnerable groups, perhaps reflecting the fact that CE organisations included in this study were very well-established and community focused. Some interviewees noted that a lack of diversity is something that the CE sector generally struggles with. However, due to their role as trusted intermediaries, CE organisations were often able to engage with communities where trust in other institutions was either never present to begin with or had eroded. We, therefore, find that CE organisations can be instrumental in engaging marginalised people where other institutions, such as councils or energy providers, may struggle. Additionally, energy poverty alleviation services and trusted advice provided by some CE organisations were found to be particularly useful for engaging with marginalised and vulnerable people. Finally, a third benefit identified in our analysis is the role that CE organisations can play in linking social capital. It was found that CE organisations can enhance linking social capital by operating as a trusted connection between local people and those in positions of power.

Taking these findings together, our paper expands on the role of CE organisations in providing trusted advice, making a significant contribution by proposing "informational justice" as a fourth tenet of the EJ framework. In this context, informational justice refers to equitable access to trusted, impartial, accessible and reliable information on energy issues. This paper makes new contributions to the EJ framework by arguing that trusted information is an essential component in achieving EJ, alongside the existing three tenets of distributional justice, procedural justice and recognitional justice. The inclusion of informational justice as a fourth tenet results in a more holistic and comprehensive framework of EJ. Trust is fundamental in achieving EJ, and the role of trust has been greatly underappreciated within CE and EJ scholarship. Considering this, CE was found to play a key role in being able to enhance EJ.

Despite the findings showing that CE organisations were well placed to engage with marginalised people, literature on CE has shown that many CE initiatives lack diversity and engagement with marginalised groups. There has not been research on how this can be addressed nor recommendations for how this can be improved. Regarding this, three key themes were identified for how trust in CE projects might further enhance inclusion, diversity and equity. Firstly, the need to adopt a genuinely community-centred approach was identified. For example, this could entail engaging people at the very outset of a project, making efforts to understand and respond to a range of community needs, collaborating with diverse groups, and supporting "community activators".

A second theme was the importance of offering diverse and accessible opportunities for engagement to broaden participation. For example, lowering investment thresholds for community share offers, raising awareness of CE, having online and offline engagement options, proactively reaching out to diverse communities and using relatable and accessible language. Thirdly, embedding equity and justice within the organisational practices and operations of CE organisations was identified as another key theme. For example, the adoption of justice-orientated frameworks (such as the Just Transition Declaration), training and inclusive recruitment were highlighted as key suggestions. However, it is important to note that to pursue meaningful community engagement, especially with marginalised or vulnerable communities, CE needs to be provided with adequate funding and resources to do so.

In conclusion, this research contributes to the growing bodies of literature on CE and EJ by illustrating some of the broader social benefits and potential of CE organisations to support a just transition. As trusted intermediaries, such organisations contribute fundamentally towards EJ. Our findings reveal informational justice as their key contribution, which has gone unrecognised in the EJ literature to date. To facilitate a more inclusive, diverse and equitable energy system, our findings point towards the need for a "trust transition" with informational justice at its core.

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