



Conclusion

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Abstract This chapter reviews the lessons from previous chapters, aiming to develop a synthetic perspective on the contribution of community energy to accelerating the transition to sustainable energy and to incorporate justice considerations into such transition. The chapter argues that community energy is a means to build strong foundations for a transition to sustainable energy, challenging the epistemic injustices embedded in current energy systems. It also argues for engaging in the practice of commoning energy as a means to address and generate action to respond to the energy justice dilemmas raised by the transition.

Keywords Community energy · Resilience · Intersectionality · Makeshift energy systems

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12.1 INTRODUCTION

This book emerged from a desire to bring coherence to the collective project of CESET, finding common threads across disciplines and perspectives. Like CESET, this book is inspired by a normative perspective on community energy: a perspective that sees community energy as a positive force within the current landscape of energy transitions. This normative commitment to community energy relates to a long tradition of environmental thought that connects goodness, peace, and sustainability to ‘smallness’ because small-scale interventions are less likely to cause harm to the environment (Schumacher, 1973). The importance of place-based action and the generation of collective solidarities have engendered debate on appropriate forms of socio-economic organisation, from eco-localism (Curtis, 2003) to community economies (Gibson-Graham & Roelvink, 2016). However, these attempts to redefine local economies in ecological terms struggle to engage with the promise of technology, wary of the emphasis on technological fixes that tend to pervade proposals for sustainable futures (Kerschner et al., 2018). Schumacher’s 50-year-old peace-inspired vision emphasised the making of technology as a factor influencing how it mediated or prevented the unbridled exploitation of natural resources as long as technology is accessible and leaves room for human creativity (Schumacher, 1973). Community energy engages with this reflexive attention to the potential of new renewable technologies to revive places, something that counters the increasing deployment of renewables as providing technofixes for the increasingly present ecological crisis (Rudolph, 2023). But the context of community energy is uneasy as many fear its promises are mere illusions. Community energy could be likened to a hologram, a seductive three-dimensional image incorporating the multiple dimensions of energy justice, which is, in fact, nothing else than an optical illusion, beyond which lies a flat technofix. This book argues that community energy is not an illusion or a hologram; it is indeed a means to rethink the transition to sustainable energy.

However, the most destructive criticism of community energy is not its suitability to deliver sustainable energy but, rather, its futility. Community energy appears to provide nice-to-look anecdotal projects that, even if they succeed, sooner or later become overtaken by the unstoppable advance of large-scale renewables. The efforts towards community energy appear as worthless, vanity gestures to an alternative that does not really exist in the face of more efficient, better-run networks capable of reaching

economies of scale. Community energy is then displaced to marginal spaces, linked to the remote, where no alternative is available. There is little recognition of the complex role that small-scale decentralised projects and cooperative forms of organisation have played in the history of electricity networks (Lehtonen & Nye, 2009). Such a sense of futility is expressed by different kinds of people, from electricity professionals to policymakers to people who could benefit from the services provided by community energy. There is a resistance to rethinking the electricity network beyond a dichotomy between centralised and decentralised systems (e.g., Bauknecht et al., 2020), only exacerbated by concerns about the impact of decentralised systems on the reliability of energy networks (Veldhuis et al., 2018). But there is also a sense of preoccupation about being disconnected, about not being part of broader projects of progress and nation-building enshrined in electrification projects. What is never spoken about enough is the failure of the modern infrastructural ideal of reliable, universal provision (Graham & Marvin, 2002), its incompleteness, its dependency on government subsidies, and the extent to which it became an instrument of control and inequity reproduction (Coutard, 2008). The globalisation of networks has not accelerated their splintering but rather highlighted their already existing precarity. Even in countries where 100% of the population has access to electricity, such as the UK, multiple factors such as the quality of the built environment, social relations, or affordability generate energy vulnerabilities manifest in poorer people's lived experiences (Middlemiss & Gillard, 2015). In engaging with the notion of infrastructure incompleteness in Nairobi, Guma (2020; p. 728) argues:

I make the case for incompleteness as a notion that opens up a frame for analyzing a kind of urban infrastructure that, while diverging from so-called norms and ideals, cannot be described as failed or broken but as something else entirely.

This notion of emergent infrastructures in-the-making speaks to uncharted infrastructure futures requiring political alternatives. Community energy speaks to new conceptions of energy networks that, while recognising their incompleteness, emphasise the notion of autonomy. A body of research on energy sovereignty increasingly focuses on enabling the autonomy of communities to participate in decisions about their

energy service (e.g., Castán Broto, 2017; Schelly et al., 2020). Community energy makes it explicit how those decisions can be advanced through a direct engagement with the technologies that provide electricity. Back to Schumacher's enchantment with technology, the technology works in small-scale projects when everybody has access to it and community creativity is prioritised. Community energy is the means to do just that.

The contributors to this book have dedicated part of their careers to understanding how to deliver community energy and in which ways it benefits those communities that engage with it. In addition, in this book, they were asked to interrogate whether those contributions extended beyond specific projects to influence a systemic change of energy systems at the regional or national levels. This conclusion aims to elaborate a synthesis of lessons learned, both in the acceleration of transitions and the manner of their delivery because it matters that transitions to sustainable energy are also fair and just.

The combined reading of the previous chapters throws two lessons for a normative perspective on community energy. The first lesson is that for community energy to advance transitions to sustainability, it requires patience: it requires being able to wait, being able to persist despite breakdowns and annoyances, and overcoming difficulties in making the project possible. The idea of patience has already emerged in previous chapters, particularly in relation to the need to find patient capital to finance community energy projects in countries like Malawi (Chapter 5). At the same time, patience is required not only from the investments and grants that support community energy but also from infrastructure managers (in making projects work) and communities (in maintaining hope over time as projects consolidate and expand). Too often, community energy projects are evaluated in terms of success whether they continue over time without recognising that failure alone is not an indicator of the extent to which a given project has had a lasting impact on the energy landscape in which it takes place, helping to consolidate ideas, launch other projects, create new expectations among communities.

The second lesson is that the know-how of community energy projects emerges from practice as practitioners have engaged with the possibilities to achieve different degrees of energy autonomy in their own communities. Community energy projects are themselves diverse, but in every case, they require assembling an array of endogenous and exogenous resources, requiring the negotiation of multiple interests and perspectives. This again calls for rethinking what a thriving community energy project looks

like because community energy requires various moments of ‘success,’ including drawing resources for the project, enrolling the community, building the project, making sure the project is maintained over time, and finding ways to adapt the project to changing energy policies and changing energy demands. It is almost impossible for community energy projects to be successful every time and all the time. And yet, community energy projects continue to emerge out of utopian dreams of a more sustainable, resilient, and inclusive energy system. Community energy is often nothing more than an example of makeshift infrastructures: an example that helps reimagine sustainable energy futures in practice.

12.2 IN WHICH WAYS DOES COMMUNITY ENERGY CONTRIBUTE TO ACCELERATING THE TRANSITION TO SUSTAINABILITY?

Following climate activists’ metaphors, Chapter 1 proposed to think of the transition to sustainable energy (and to sustainable futures more generally) as a massive collective project, something akin to the construction of a cathedral. That is a transition: a long term, complex project, whose completion over centuries depends on shrewd planning but also on the interactions of multiple actors, overcoming multiple difficulties within the project and beyond the project. Take for example the case of the famous basilica La Sagrada Familia in Barcelona: at its core, the basilica embodies the vision of just one person, Antoni Gaudí, but the building would not exist without the monumental collective effort sustained through private donations, public support, and professional commitments that since 1882 have sustained its construction, which will likely not be completed until 2040. Like a transition, it is a dream materialised in space. Rather than reconfiguring an existing regime the perspective that dominates current discussions of transitions to sustainability (Markard et al., 2020)—the metaphor of the cathedral invokes a different perspective away from disruption and in favour of engaging with the provisionally, incompleteness and malleability of current infrastructure systems.

At the same time, it is instructive to think of the ways in which a cathedral is not an apt metaphor for a transition, specially a just one. First, there is of course the use of an architectural metaphor from the West, which may impose certain forms of coloniality in the way transitions are

approached. For example, using the mosque as a metaphor for transitions instead would emphasise horizontal, rather than vertical, expansions in the conception of a transition, perhaps turning to the flows of people through the building rather than the imposing vision of the cathedral. Which leads us to the second limitation to deploy this metaphor: the reliance on grand visions of futures, sometimes produced by a relatively small number of individuals. The transition is a collective effort, not only in the summing up of efforts but also in the combination of future visions. Here is where the exploration of a metaphor helps us to understand the focus of current efforts and what matters in activating action for a transition.

If community energy is part of the foundation of a transition, this is not because that transition is predicated on the technology advanced through community energy but because community energy helps in creating a solid ground over which different building blocks of the transition can be laid. Such solid ground consists of three crucial contributions of community energy: linking energy provision directly not to economic profits but to sustaining thriving communities, facilitating the democratisation of energy systems through the active participation of communities in their governance, and challenging the epistemic injustices that prevent access to technology. Most chapters in the book touch upon these three themes.

The book departs from a recognition of the multiple benefits of community energy to the communities who participate in such projects (Fig. 12.1). The overview of such benefits provided in Chapter 1 resonates with the practical experiences, particularly in Chapters 9 and 10 in which the accounts of projects in Malawi demonstrate how the active involvement of communities enables projects that become locally cherished and celebrated.

Chapter 2 elaborates these contributions from the perspective of building community resilience. The focus on resilience is transformative because it emphasises an entirely different model of thriving communities. The increased deployment of resilience discourse as an strategy to deliver forms of neoliberal planning that neither recognise local needs nor question the imposition of external, investment-led solutions to problems that do not exist has raised concerned critiques of a shift of emphasis from sustainability to resilience (Kaika, 2017). There is a concern that strategies advanced under the banner of resilience, from large concrete infrastructures for protection to smart city projects, not only fail to build thriving communities but also harm their long-term sustainability leading to forms of maladaptation (Eriksen et al., 2021).

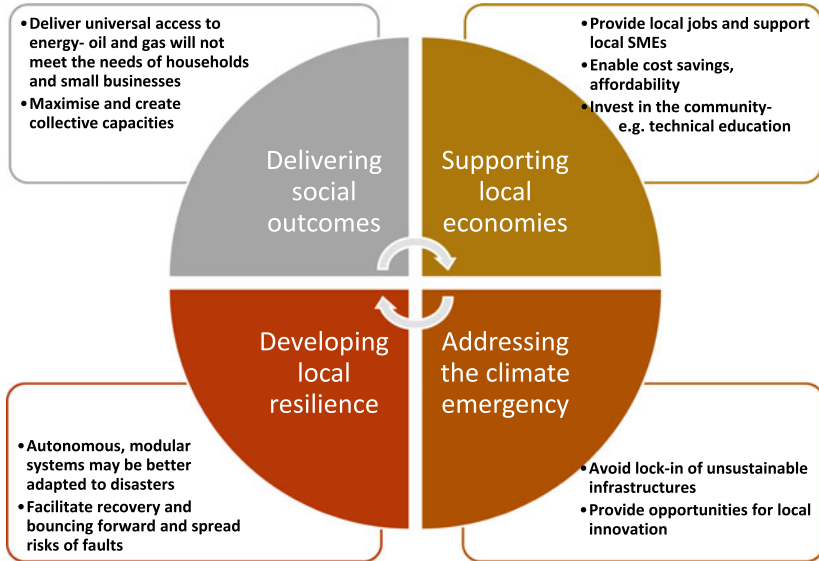


Fig. 12.1 How community energy benefits the communities that participate in those projects (*Source* own elaboration)

The approach to community resilience advanced through community energy projects shifts this thinking on its head by examining resilience as a means to transform the political systems that impact the wellbeing of communities (Pelling, 2010). This advances the perhaps subversive notion that standing your ground is for communities an instance of radical politics (Bahadur & Tanner, 2014). Chapter 2 explains that such political community resilience also depends on direct engagement with the different stages of technology implementation and development. The implicit question in community energy projects is the location of the potential for radical political change: is it in universalising assumptions of collective wellbeing that inspired infrastructural nation-building projects or on the promise for autonomy embedded in modular, flexible, and interchangeable technologies that make community energy possible?

At the same time, community energy entails an opening for the democratisation of energy systems, another element of the foundations of a transition to sustainable energy. Chapter 4 engages directly with this challenge reflecting on the challenges posed by renewable energy, and

the realisation that renewable technologies do not ‘automatically produce democracy and justice.’ Unfortunately, renewable energy technologies enable new means of appropriation of energy territories by large energy companies, increasingly contested across space. Community energy is not exempt of contestation. Micro-generation infrastructures generate tensions and are fraught with difficulties, creating new political dynamics and reconfigure existing discourses (Armstrong & Bulkeley, 2014). That is the reason why the argument of the book is articulated around the question of what a community is and how is a community constituted around community energy (Chapter 3). This is not an easy question for the interpretations of community are many and their enactment in practice entails a politics of place: building solidarities and processes of inclusion requires assembling common purposes which necessarily create a parallel process of boundary making and implicit exclusion. However, rather than striving for perfect communities of homogeneously happy people, community energy engages with complex heterogeneous groupings which contain multiple interests. Conflict is not an extraneous negative force but a constitutive element of the formation of those communities. By building solidarities such communities are able to assemble resources (Chapter 5), to counter regulations that do not address their needs (Chapters 6, 7, and 11), and create a sense of pride that could be thought of as a means for empowerment (Chapter 10).

This goes hand in hand with communities’ access to technology, which requires a good fit between communities’ skills and the technical requirements of community energy. Without doubt, one of the main contributions of community energy to the foundations of transitions is challenging the epistemic injustices that prevent the development of community energy. Development organisations such as Practical Action, one of the charities within the Schumacher’s circle, have proposed to have a debate on technology justice, that is, on the uneven distribution of knowledge resources which limits people’s possibilities to access innovations and development opportunities (e.g., Milner, 2017). However, more recent debates on postcolonial knowledge have emphasised how imperial notions of objective knowledge, scientific rationality, and social norms have created forms of coloniality that remain relevant to understand the production of knowledge today (Tamale, 2020). This thinking resonates with an established criticism within the feminist literature about the situatedness of knowledge (raised in Chapter 4). Rather than having the right knowledge to pass to communities, the question is how existing

knowledge is structured by certain imperial visions that contribute to reproduce inequalities.

There are epistemic injustices the injustices relate to the production of knowledge that relate not only to the distribution of knowledge resources across society but also with the deficits of credibility that people face because they belong to certain groups within society (e.g., marginalised, poor, colonised communities) (Fricker, 2007). Co-production projects, such as community energy projects, are powerful means to challenge those epistemic injustices (Castán Broto et al., 2022). Figure 12.2 explores how community energy projects have the potential to challenge different epistemic injustices, from those that relate to the distribution of knowledge resources to those that relate to the recognition and legitimisation of different actors to hold such knowledge. In this book we have aimed to show additional examples of those contributions, showing particularly how the experience of community projects disrupts ideas about the dominance of private actors in the energy system (e.g., Chapters 7 and 11).

However, from the outset, we dedicated specific attention to the process of building legitimacy around energy knowledge. The incursion

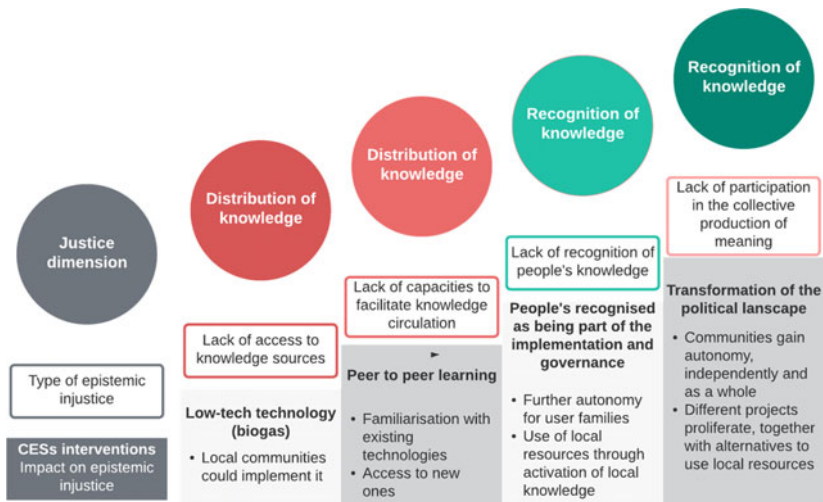


Fig. 12.2 Examples of how community energy projects address different dimensions of epistemic injustice (Source Castán Broto & Robin, 2023)

of this book in this territory is merely exploratory, and for now, limited to the case of Ethiopia. However, Chapter 8 shows what happens when we examine simultaneously what skills are needed for a transition to sustainable energy and what skills are offered within current higher education systems. The chapter throws light on the gender gap and the reproduction of technocratic values in the transition to sustainable energy in Ethiopia, observations that resonate with the incipient results from Malawi and Mozambique. This book was initially thought to address two audiences: community energy practitioners and policy makers. However, its main lesson is for academics: we owe it to our society to deliver a better education to build the foundations of a transition to sustainable energy.

12.3 IN WHAT WAYS DOES COMMUNITY ENERGY ADVANCE JUSTICE IN TRANSITIONS?

Achieving a transition, though, is different from doing that in a just manner. Clearly some of the foundations proposed above are indeed means to advance forms of redistribution and wellbeing, facilitate the recognition of communities' interests and perspectives, and improve the participation of all people in the transition. However, is that enough evidence of a just transition? Is that the kind of justice is demanded in the context of a massive technological change?

The discourses of environmental justice that inform the more specific discussions of energy justice in transition reproduce imperial models of thinking and in doing so generate inadequate responses to the possibilities of a just transition everywhere (Álvarez & Coolsaet, 2020). Discourses of just transitions in particular influence how trade-offs are experienced and conceptualised, and whose priorities and knowledge are prioritised. Academic analysis has focused on establishing a distinction between the West which generates ideas of justice as a structure discourse for action and the rest, where those ways of thinking do not hold. The response is to find alternative conceptualisations of justice from elsewhere, place-based conceptualisation of justice which extend beyond those perspectives (Tornel, 2023). While documenting alternatives is part and parcel of an enriching debate on what does it mean to have a transition, it is unlikely that a definitive alternative can be developed. Even through the lens of a variety of radical theory, energy justice does not become dramatically redefined only nuanced (see a recent debate on this topic: Dunlap & Tornel, 2023; Sovacool et al., 2023).

Perhaps the separation between two worlds, one Global South and one Global North, as shaped by a boundary across which ideas travel is itself at the root of the problem. Not only is based on a colonial misnomer that does not correspond to any identifiable geography, but also, it tends to obscure how coloniality emerge from an imperial project of colonisation that affected the whole world. For example, drawing a Global North that includes North America automatically erodes the history of First Nations in those territories. For indigenous peoples, justice emerges from the recognition of responsibilities as they are distributed across social, political, ecological, and material relations (Whyte, 2013). Finding common challenges across geographical locations and develop vocabularies to reflect the particularities of specific contexts (as seen by the communities leading energy projects) is a better strategy than confining certain vocabularies to predetermined territories. This conclusion resonates with the thesis of this book, about the need for research and learning emerging from practical experiences in a variety of countries, but specially those that have received less attention in the energy transitions literature (such as Ethiopia, Malawi, and Mozambique).

In the context of CESET, community energy emerges from a promise of engagement within communities that wish to be recognised in their complexity. Projects like Chipopoma, in North Malawi (Chapter 10) battled scepticism before the project could be established. Many local residents were not supportive of the project, but once people saw that their neighbours got electricity, they became interested in being part of it. So, while at the beginning of the project the question was whether the community was accepting of the project, as the project consolidated the question became how the project can reach everyone. That is the reason why growing and extending the network becomes so important for more mature community energy projects, as it has happened in the case of Bondo and the Mulanje National Park (Chapter 10). Justice emerges in relations that extend beyond questions of responsibility, not only through what the project provides today, but also through what it can offer in the future.

For that reason, justice becomes, most of all, a question of possibility and opening. Addressing epistemic injustices is important, in the first place, because it creates possibilities that otherwise remained closed. Possibility, however, is not only a question of knowledge. It is also a question of politics, frameworks, technologies, and resources as the chapters

of the book show. In this context the book's aim is to inspire initiatives to make community energy, because it is only through the making of a collective, shared energy project that the possibilities of community energy become available, even if the project raises new justice dilemmas. The shadow of global capitalism lures in a landscape of multiple forms of precarity, but in specific locations, precarity is engaged in practical ways, engaging with whatever possibilities are provided in existing ecosystems (Tsing, 2015). Those are the possibilities over which the foundations of a transition can be built. For the communities that actively assemble their own energy projects, the question is not one of refining the definition of justice, but of constructing the means of life in whatever ruins of imperial pasts we find ourselves.

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