ENERGY DEMOCRACY AS A PREFIGURATIVE SOCIAL MOVEMENT: RESHAPING SOCIAL RELATIONS IN ENERGY SYSTEMS

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Abstract

This dissertation examines the "energy democracy" movement, which seeks to socialize energy by transferring ownership to workers and communities in a sector long dominated by corporate control. While the movement has achieved successes in local contexts, it faces challenges. Theoretically, it has been criticized for lacking clarity and for doubts about whether democracy alone ensures justice. Practically, it has encountered co-optation and difficulties scaling to achieve systemic transformation. These challenges lead to the central question of this study: *"Which practices are energy democracy actors enacting, and how are they extending these practices to contribute to broader transformation?"*

To address this question, the study investigates the experiences of on-the-ground energy democracy actors. Drawing on semi-structured interviews across five cases, it conducts a qualitative thematic analysis of the transcripts. The experiences of these actors are examined through the lens of prefigurative social movements, which experiment with democratic social relations in the present to model a desired future society. This framework emphasizes (1) the enactment of alternative practices—how actors structure themselves locally—and (2) the extension of those practices beyond the local to challenge systemic constraints. Since energy democracy is a prefigurative movement, this connection, underexplored in existing literature, offers a novel way to analyze the movement on its own terms.

Findings reveal both potential and limitations. Actors enact democratic practices such as decentralized leadership, egalitarian approaches responsive to local needs, and collective ownership accountable to communities rather than shareholders. They also attempt to extend these practices through political engagement, movement-building, and cultural change. Yet a crucial challenge remains: scaling with limited capacity against vast corporate resources. While energy democracy offers an alternative vision, localized organizations alone are unlikely to counter entrenched corporate power.

Often framed as isolated local initiatives, this study situates energy democracy within broader movements prefiguring a democratic economy, revealing it as a coherent political project. This alignment creates pathways for collaboration, solidarity, and shared strategies with these movements that can reduce burdens on individual actors. Importantly, the study highlights how

academics can advance transformation by fostering networks, strengthening coalitions, and investigating questions that support structural change.

Dedication

I'd like to dedicate this dissertation to the amazing group of community organizers, activists, and volunteers I've had the privilege of working alongside at Toronto Food Not Bombs (TFNB) over the last five years. Food Not Bombs is a global loose-knit network of independent collectives that share meals within their communities. Our Toronto chapter evolved during the COVID-19 pandemic as we witnessed increased food insecurity alongside the temporary closing of many programs offering community support. To address increased need, we expanded from Food Not Bombs' typical shared meals model to the creation of a volunteer-run food bank providing a full selection of groceries to 300-400 people in Allan Gardens Park every week at the height of the pandemic. Since that time, we've grown to roughly 100 regular volunteers to support driving, food preparation and service, a community garden, mutual aid for addressing other systemic challenges, encampment support across Toronto, and a network for shared learning, creativity, and activism.

TFNB is in every way a prefigurative social movement—voluntary, horizontal, consensus-based, and filling the gap left by our existing economic and political systems. Incorporating anarchist-adjacent principals, we consistently aim to embody the values, practices and social relations of a more egalitarian world. Achieving this in-practice, perhaps unsurprisingly, has not always been easy. We've experienced challenges as we work to unlearn hierarchical notions of leadership, achieve consensus-based decision making, and take on the heightened responsibility that comes with collective ownership while juggling other aspects of our lives. Getting to where we are now has involved experimentation, reflection, and the occasional misstep. Since expanding our model and activities, however, we now sometimes observe how our weekly food service volunteers appear just like a hive of worker bees, operating without any authoritative presence, with each of us knowing how our individual role fits in with our collective project.

Having this example be so front-of-mind in my life while conceiving and developing my dissertation project was simply invaluable, and I cannot understate the influence of TFNB on my PhD work. Our radically democratic practices have not just been empowering; as owners and decision-makers, we have built a sense of responsibility and connectedness that feels tangibly different from typical models of work and volunteerism. It is this transformative power, along with all its struggles and limitations, that has motivated my dissertation project. TFNB, I love you all and I'm so proud to be part of this movement.

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I want to thank my family for their support and encouragement throughout my academic journey. To my partner, Brent, I could not have done this without you, and I love you so much for patiently putting up with me being a student for so long. To my parents and my sister, thank you for all your encouragement over the years. To Roo for sticking around so long and being the silliest little companion. **I'm so incredibly lucky to have you all in my life.**

Beginning my undergraduate studies in Newfoundland, I was motivated not only by an interest in climate research, but also by our experience of pervasive energy poverty—something that stood in contrast to the false promises from political leaders about building energy sovereignty in our province. Since moving to Toronto, I've had the privilege of working with many mentors and research partners to explore these issues and critically engage with alternative approaches to energy systems. There are no simple answers or silver-bullet solutions, and I've been grateful for the opportunity to wrestle with the complexity of these challenges. These experiences have shaped not only my research, but also my understanding of the broader political, social, and economic dimensions of energy transitions and the climate crisis.

To my PhD supervisor at York University, Dr. Mark Winfield: I can honestly say I don't believe I would have made it through the PhD program without your guidance and support. I can't thank you enough for consistently going above and beyond. To Dr. Runa Das, from whom I've learned so much and for whom I'm deeply appreciative, and to Dr. Idil Boran for your time on my committee and for your thoughtful consideration of my work—thank you both. I would also like to thank Dr. Julie MacArthur, Dr. JJ McMurtry and Dr. Laura Taylor for your involvement in my dissertation defense.

Finally, I'd like to thank my colleagues in recent years. At ICLEI Canada, I'm fortunate to be part of an inclusive and supportive workplace—especially while navigating ongoing health challenges. I'm excited for the opportunity to work directly with local governments while continuing my research on energy democracy and energy transitions. Additionally, I want to thank the team at Durham Region, whose collaboration and shared work helped shape my perspective and professional network. Throughout these experiences, it has meant a lot to me to put my research into practice and build bridges between academic work and what's happening in local communities.

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Chapter one: Introduction

A global energy transition is currently underway, involving changes across whole energy systems that include integrating emerging renewable, low carbon, and decentralized energy technologies. Energy transitions are typically characterized by gradual shifts over decades or centuries (Smil, 2017). However, given that the energy sector is responsible for roughly three-quarters of global greenhouse gas (GHG) emissions (IEA, 2023), a more radical and rapid transition than is currently unfolding is essential for addressing the climate crisis. To address this urgency, national and local governments, as well as a wide variety of non-governmental actors, are increasingly involved in low carbon and renewable investments and policy interventions (de Coninck, 2018; IPCC, 2022a). These efforts, however, continue to fall short of the transformation required for rapid decarbonization (Masood et al., 2022). Currently, GHG emission reductions associated with existing climate policies fall short of the 1.5°C target of the Paris Agreement and are likely to lead to a rise in global temperature of between 2.4°C and 3.5°C by 2100 (IPCC, 2022a)—notably, 2024 was the first year on record with a global average temperature that exceeded 1.5°C (Copernicus, 2025). Depending on the magnitude of temperature rise, this overshoot will involve disastrous and irreversible impacts on human life, including increased wildfires, droughts, storms, sea level rise, and ocean acidification (IPCC, 2022b).

Occurring alongside rising greenhouse gas emissions has been unprecedented levels of inequality, both globally and within countries (Oxfam, 2022), Roser, 2021), which has included rising costs of basic necessities and stagnated or inadequate wage increases (Unifor, 2022). In this context, there has been growing disillusionment that our existing institutions are capable of addressing the economic crisis we face (Foa et al., 2020; Wike & Fetterolf, 2021). While varied responses are emerging—including rising reactionary right-wing populism—one of the responses

to these crises is new discourse or narrative that emphasizes the need for 'system change' (Roussopolous, 2019). This discourse, which is gaining more prominent attention (Levidow, 2023), includes recognition that the economic and ecological crises we face are not unrelated. That is, not only will the climate crisis deepen existing injustices, but the same structures that create inequality also created the climate crisis in the first place. In this framing, overcoming the climate crisis requires more than technological innovations or incremental policy changes; it requires a reimagining and restructuring of the political and economic systems in which energy systems are embedded.

Importantly, system-change discourses increasingly involve more than just critiques. Rather, they include the emergence of scholars, communities, and grassroots organizers across a variety of sectors envisioning and experimenting what system change may look like in practice. These efforts build upon long-running economic critiques—i.e., they move beyond identifying the features of our existing systems that lead us to crisis—to imagine and experiment with alternative social relations that would be consistent with a more equitable world. In the energy sector, this experimenting has prominently involved emerging renewable and low carbon technologies, which offer the potential for alternative ownership arrangements in the energy sector. Specifically, the 'energy democracy' movement—the topic of this dissertation—involves the possibility of socializing energy by transferring ownership to workers and communities in a sector that has traditionally been dominated by corporate ownership and control (Burke & Stephens, 2018; Fairchild & Weinrub, 2017).

1.1 Energy democracy: A prefigurative social movement

The energy democracy movement emerged in the early 2000s from grassroots activism, radical intellectual circles, unions, and communities of colour (Lennon, 2021; Szulecki, 2018) and

was later developed as a concept within academic literature (van Veelan & van der Horst, 2018). It has been conceptualized as an emergent social movement where workers and communities are imagined as active participants in the ownership and control of whole energy systems (Burke & Stephens, 2018; Feldpausch-Parker et al., 2019; Szulecki, 2018). In practice, energy democracy involves novel forms of local, collective and socialized ownership, including collective prosumerism, community ownership and cooperatives (Wahlund & Palm, 2022), and other energy projects that are operated democratically in support of the commons (Martinez, 2017; van Veelen & van der Hurst, 2018).

Energy democracy is often associated with growing disenchantment with liberal democratic and representative practices (Szulecki, 2018), and is seen as a component of a broader political movement for radical and participatory democracy, including the democratization of our whole economy more broadly (Sweeney, 2012; Stuart et al., 2020). Energy democracy scholars and activists offer a critique of dominant approaches to energy transitions that fail to reshape our social relations[1] (Becker & Naumann, 2016; Burke, 2018). Instead, they highlight how structural transformation, rather than regulatory 'tweaks,' is required to meaningfully mitigate environmental catastrophe and build a more egalitarian future (Sweeney, 2012). Burke (2018) explains:

> *Conventional ways of communicating about the transition to renewable energy in North America presuppose that energy systems can be changed while sustaining existing social, political, and economic relations. Energy democracy counters such ostensibly apolitical narratives by emphasizing the socially transformative potential of this transition* (p. 1)

To structurally reshape these systems, energy democracy advocates for the reconfiguration of social relations in energy systems, i.e., by reshaping the *ownership* and *control* of energy (Van

[1] See Glossary of terms for 'social relations.'

Veelen & van der Hurst, 2018; Wahlund & Palm, 2022). Through this reshaping, energy democracy is seen as a potential instrument for achieving goals such as energy decommodification, and an opening into degrowth and eco-socialism (Becker, Naumann, & Moss, 2017; Carroll, 2020; Kunze & Becker, 2014; and Moss et al., 2014; Stuart et al., 2022), thus challenging a new social vision beyond the dominant capitalist system (Burke, 2021).

The rise of energy democracy coincides with the dramatic upswing of social movements since the early 2000s that similarly (1) incorporate the language of radical democracy to critique our economic system and (2) experiment with desired future social relations within their activities and practices (Monticelli, 2021; Raekstad, 2019; Törnberg, 2021). These social movements are increasingly referred to as *'prefigurative'* social movements, which have been defined as "experimental implementation of desired future social relations and practices in the here-and-now" (Raekstad & Gradin, 2020). The term 'prefigurative' is used to describe a social or political approach in which individuals or groups embody the principles and values they advocate for in their present actions and organizational structures. Unlike protest-based social movements or conventional politics, prefigurative social movements construct alternative social relations at the local level, thereby '*prefiguring*' or instantiating radical and structural change in and through practice (Törnberg, 2021; Yates, 2015). Prefigurative social movements are rooted in the idea that political and economic transformation should be embodied within the present, rather than waiting for some future revolutionary moment (Boggs, 1977). They therefore emphasize the importance of creating and practicing alternative ways of organizing and living that align with the desired future society, while also emphasizing strategies to extend those practices in an effort to challenge dominant systems and foster broader systemic change (Boggs, 1977; Fians, 2022).

The energy democracy movement, through its aim to reconfigure of social relations within energy systems, is an example of a prefigurative social movement (McLean, 2022; Stuart, 2022). Other examples include the Occupy Movement, where organizers incorporated consensus-based participatory democracy that were inclusive and anti-hierarchal (Milkman et al, 2012); Black Lives Matter, where activists similarly rejecting hierarchy, while also wielding Black joy and culture unapologetically to build a social order free of antiblackness (Harris, 2022); police and prison abolition activists who experiment with community-based alternatives (Kaba, 2022); and many mutual aid groups, e.g., Food Not Bombs, where communities create collective action to meet people's material need and build ties of solidarity (Ferrari, 2022; Fernandes-Jesus et al., 2021). Ultimately, prefigurative social movements aim to create a microcosm of the desired social or political change within existing systems, both enacting alternative practices within specific local contexts and extending these practices to foster broader systemic change. In other words, prefiguration not only denotes a type of social movement, but a *theory of change*[2] for how societal transformation may unfold (Wright, 2010).

1.2 The problem with energy democracy

Although the energy democracy concept has seen rapid growth both within and outside of academia over the last decade (Feldpausch-Parker et al., 2021), it has faced setbacks both in theory and in practice. In theory, energy democracy is also somewhat notoriously described as vague and 'slippery' (Szulecki, 2018; van Veelen & van der Hurst, 2018), leading some researchers to argue that the concept should be subsumed under the banner of justice-oriented theoretical frameworks (Droubi et al., 2022)—frameworks which, while valuable, fail to challenge the underlying structures that create inequality (Lee & Byrne, 2019). In practice, the most transformative aspects

[2] See Glossary of terms for 'theory of change'.

associated with energy democracy are commonly watered down or abandoned entirely in initiatives that similarly appeal to local democracy but fail to challenge existing social relations, e.g., collaborative governance (Berthod et al., 2022) and community energy planning (Wyse & Hoicka, 2018; Wyse et al., 2025). In other words, despite its successes, the energy democracy movement is at risk of co-optation and erasure, both in theory and practice. Providing greater clarity to the energy democracy concept is therefore an important factor in the continuation of the movement.

The lack of clarity surrounding energy democracy mirrors that of prefigurative social movements more broadly. The nature of prefigurative practices—i.e., small, local, collective organs of popular control (Boggs, 1977; Wright, 2021)—is somewhat necessarily 'slippery', given local experimentation of difference across contexts (Schiller-Merkens, 2022). This lack of clarity presents a challenge for prefigurative social movements. When prefigurative practices (e.g., mutual aid, community alternatives to policing, and anti-hierarchical protest movements) are seen as seen as entirely unconnected, it becomes incomprehensible how they may contribute to broader societal transformation. On the other hand, when they are seen as local experiments aiming to instantiate structural change by enacting and extending alternative practices, the transformative potential may be better understood as a coherent political project.

1.3 Aim and objectives of the dissertation

The aim of this study is to address the research question: "**Which practices are energy democracy actors enacting, and how are they extending these practices to contribute to the transformation the movement advocates for?"** To address this question, the dissertation study investigates the experiences of energy democracy actors through the lens of prefigurative social movements. That is, I use the theory of change associated with prefigurative social movements as

a theoretical framework to consider energy democracy in reality. As is explored in greater depth in *Section 3: Methodology*, the study uses five illustrative cases of energy democracy, with data obtained through interviews and supplemental contextual desk research. Interview data are analyzed using a thematic analysis, with themes identified across the theoretical framework. In addition to answering the research question, objectives of the dissertation include:

1. **To situate energy democracy in the broader social movements it is embedded in—specifically, the prefiguring of a democratic economy.**

   Although literature pertaining to prefigurative politics has arisen alongside energy democracy literature, there has been limited engagement between them (a recent exception being Wittmayer et al., 2022). By better understanding and investigating energy democracy as a component of these broader struggles, energy research may benefit from lessons of these broader literatures. For example, and as the literature review of this dissertation will explore, prefigurative scholarship wrestles with how building alternative structures for social power may instantiate transformation in systems of entrenched power, i.e., dual power (Boggs, 1977; Wright, 2021). Furthermore, 'energy democracy,' as a political goal, will not be achieved through a siloed struggle in the energy space alone. As has been argued by energy democracy scholars, energy democracy is "not merely a matter of instituting more meaningful processes of community engagement in an inherently undemocratic system" (Martinez, 2017, p. 27). Rather, it requires socialized ownership and democratic control of resources and the mechanisms of production more broadly (MacArthur, 2016). Thus, by understanding and investigating how energy democracy is a component of broader struggles to democratize the economy, we are far more likely to meaningfully contribute to these efforts.

2. **To aid in the conceptual clarity of energy democracy as concept within transitions research, including bridges between theory and practice.**

   Given the importance of research that adequately wrestles with the intersection of energy transitions and equity, it is critical that scholars do not inadvertently obscure the complexities inherent in this field of research. Thus, bringing clarity to ongoing debates in transitions literature, specifically in the context of scholars advocating for the erasure of the concept, may be important for the continuation of the movement. Furthermore, while energy democracy theory emphasizes the structural transformation of energy systems, there is limited research on how energy democracy may contribute to such goals in practice. Rather, investigations of energy democracy have generally involved assessing the justness of processes and outcomes within a local context. This investigation therefore enables an investigation of energy democracy on its own terms and provide insight into its broader transformative potential.

In summary, the urgency of addressing the climate crisis necessitates a profound transformation of the energy sector. This dissertation, however, starts from the perspective that the impacts of climate change are also intricately linked with unprecedented levels of global and local inequality, underlining the need for a broader structural transformation of our economy, i.e., beyond a siloed approach in the energy sector. Thus, this dissertation focuses on energy democracy—a social movement aiming to transform energy systems, that may also be understood as a component of broader social, economic, and political struggles. By investigating the energy democracy movement through the lens of prefigurative social movements, the study seeks to shed light on how energy democracy, in practice, may be contributing to the societal transformation envisioned by the movement, thereby offering an exploration of the possibilities and challenges associated with this potentially transformative endeavor.

Chapter two: Literature review

The following chapter supports the dissertation by reviewing literature pertaining to three key areas: (1) transformation of energy systems, (2) energy democracy, and (3) prefigurative social movements.

The first section, *Section 2.1: Transformation of Energy Systems,* articulates the problem the energy democracy movement ultimately aims to address. That is, this section highlights the urgency of transforming energy systems to address the ongoing climate crisis and provides an overview of the dominant approaches for reaching this goal. To achieve this, I draw from seminal reports and texts, including Intergovernmental Panel on Climate Change (IPCC) and leading energy transitions scholars. The section concludes by introducing potential weaknesses associated with these dominant approaches. Specifically, in an era marked by both the repercussions of climate change and unprecedented and growing rates of inequality globally (Oxfam, 2022), many critical theory[3] scholars who investigate climate change argue that current energy transitions paradigms fail to provide a path for the reimagining and restructuring of our political and economic landscape, which is necessary to meaningfully (and justly) address the climate crisis (e.g., Hickel, 2020; Huber, 2022). Crucially, these critiques underscore and inform the energy democracy movement and broader system-change discourses. Thus, through a review of scholarly works, this section helps to set the stage for energy democracy as a potentially more transformative solution.

The second section, Section 2.2: *Energy Democracy*, pivots towards the concept of energy democracy as a proposed solution to the challenges and critiques outlined in the preceding section. Here, seminal energy democracy literature is explored to provide an understanding of the movement, focusing specifically on the structural transformation energy democracy may

[3] See Glossary of terms for 'critical theory'.

contribute to. In other words, this section explains how energy democracy aims to contribute to reconfiguration of our social relations, thereby enabling the transformation critics highlighted in the previous section argue is required. Lastly, this section also explores potential limitations and weaknesses associated with the movement, both in theory and in practice. By exploring both the transformative potential and limitations associated with the movement, the literature review supports a complete picture of the energy democracy concept as an object of study in this dissertation.

The third and final section of the literature review, Section 2.3: *Prefigurative social movements,* delves into prefigurative social movements as a theoretical framework for assessing how energy democracy may contribute to transformation. By exploring the ideological origins of prefigurative social movements, as well as its contemporary use in theory and practice, this section constructs a theoretical framework for consideration of energy democracy in-practice. Specifically, this section explores how prefiguration describes a *theory of change,* i.e., a blueprint to bring about significant shifts in the structures of our society. By employing this theory of change as a theoretical framework, the dissertation can explore the capacity of energy democracy actors to prefigure and instantiate broader societal transformations. In other words, is energy democracy living up to these theoretical ambitions? Finally, this section considers the limitations of prefigurative social movements, specifically related to their capability to contribute to the structural transformation they advocate for. By understanding these limitations, the review enables a more thoughtful analysis and discussion of energy democracy in-practice.

Collectively, these three sections comprise a comprehensive literature review that (1) identifies the intricacies of the challenges at hand, (2) explores a potential solution, and (3) outlines a theoretical framework for assessing that potential solution. In addition to these sections,

Appendix C of this dissertation includes the manuscript *Energy Democracy: Reclaiming a unique agenda in energy transitions* (Wyse & Das, 2024), which was written alongside this literature review section and includes considerable overlap.

2.1 Transformation of energy systems

> *An economy based on extracting resources from a finite ecosystem faster than the capacity of the system to regenerate will eventually come to an end – either through collapse or intentional reorganization. Transition is inevitable. Justice is not.* (Marscarenhas-Swan in *Energy Democracy*, 2017)

2.1.1 The urgency and challenge of transforming energy systems

The imperative to limit global temperature rise to 1.5 °C above preindustrial levels, as highlighted by the Intergovernmental Panel on Climate Change (IPCC) (2018; 2022a), stems from the recognition that surpassing this threshold will exacerbate the consequences of climate change, a threshold that was exceeded for the first time on record in 2024 in terms of the global annual average temperature (Copernicus, 2025). These consequences encompass a spectrum of environmental challenges, such as ocean acidification, rising sea levels, and increased frequency and intensity of extreme weather events like droughts and forest fires. Such impacts will undoubtedly have immense adverse impacts on human life, including food security crises, as climatic changes impact crop yields and food production (Mbow, 2019; deepened inequality, as existing inequities intensify while vulnerable populations have lower adaptive capacity (Birkmanm 2022); potentially devastating impacts on human health, including the toll of extreme heat (Romanello et al., 2023); and related to the aforementioned challenges, increased political and economic instability globally (IPCC, 2022c).

The window for keeping global temperature rise below 1.5 °C has likely already closed, with global greenhouse gas (GHG) emissions needing to peak before 2025 and be reduced by 43% by 2030 (IPCC, 2022d). The IPCC's 6th assessment delivered a stark message regarding our current

trajectory of GHG emissions. Despite the pledges outlined in nationally determined contributions—i.e., commitments made by countries under the Paris Agreement that outline their targets for reducing greenhouse gas emissions—2024 was the first year to exceed the 1.5°C threshold, and we are likely to instead reach between 2.9 and 3.4°C by 2100 (IPCC, 2022d). Not only are national government commitments continuously falling short of the actions required to meet these targets, but many targets are noted to be inadequate in the first place (IPCC, 2021, p. 10). Notably, the energy sector—which includes energy production (e.g., fossil fuel combustion, electricity generation, and renewable energy), energy transmission and distribution (i.e., the infrastructure that delivers energy to consumers), and end-use energy consumption (e.g., buildings and transportation)—stands as a pivotal piece in this global challenge, contributing approximately three-quarters of the total greenhouse gas emissions worldwide (Ge et al., 2024). A radical and urgent transformation of the energy sector is therefore needed to curtail emissions and mitigate the impending climate crisis. Transforming energy systems, however, is a profound challenge. Energy researchers and practitioners commonly cite a few overarching barriers to transition, including complexity, path dependency and inertia, and entrenched power of incumbent actors. These challenges are described in the following paragraphs.

Energy systems are defined by Araújo (2014) as "a constellation of energy inputs and outputs, involving suppliers, distributors, and end users along with institutions of regulation, conversion and trade" (p. 112). Related to this broad involvement, the energy sector is associated with stronger and more pronounced complexity than other policy areas (Goldthau & Sovacool, 2012). Energy systems involve vertical complexity, as they cut 'downstream,' (e.g., the electricity network), and 'upstream', (e.g., the production of minerals); horizontal complexity, involving many actors across geographical scales; as well as complexities related to the interconnections

between other resource systems, including food and water systems. In other words, transforming energy systems involves an integrated approach across multiple levels of government and organizations across many sectors that make up our society. Given such complexity, energy transitions face barriers such as incentive mismatches, where the entities responsible for greenhouse gas emissions lack sufficient incentives to engage in mitigation efforts, e.g., landlords may lack motivation to invest in energy efficiency improvements or greenhouse gas emission reductions since tenants, who pay the energy bills, receive the direct benefits of reduced energy costs (Haley, 2023). Further, energy transitions face jurisdictional boundaries problems, e.g., provincial or federal governments hold jurisdiction over resources while local governments face costs associated with adaptation (Cappell, 2022). Thus, due to such complexities, energy transitions are commonly referred to as a 'super wicked problem' that no single actor has the capacity or resources to solve (Levin et al., 2012).

A further obstacle, commonly noted in energy transitions literature, is the inertia caused by a tendency for path dependency and associated lock-in effects (Dryzek & Pickering, 2018). A dominant feature of energy systems is that they are path dependent, referring to the idea that "outcomes are sensitive to initial conditions" (Goldthau & Sovacool, 2012). In other words, path dependency reinforces historical choices, making it difficult to deviate from established trajectories. These authors explain, "once a technology or design has been chosen, positive feedback loops among the various elements of a socio-technical system lead to a situation of "lock-in" in which the selected technological solution remains dominant by at the same time creating strong resistance against introducing new technologies" (pp. 234-235). Lock-in therefore occurs when a particular technology or infrastructure becomes deeply embedded in a system, making it resistant to change due to established norms, investments, and user habits (Unruh, 2000). In the

context of energy transitions, this means that outdated and environmentally harmful technologies may persist due to existing investments and societal structures, hindering the adoption of cleaner and more sustainable alternatives.

Lastly, the entrenched power of incumbent actors, primarily vested in fossil fuel industries and existing energy infrastructures, poses an obstacle to transitions. These well-established entities often wield substantial political influence, economic resources, and technological capabilities, creating a barrier to the adoption of alternative energy solutions (Juhasz, 2008). In a globalized and liberalized economy, threats of capital flight invoked by fossil fuel energy interests and fears among state elites of incumbents losing competitiveness are very real constraints on countries freedom to manoeuvre and introduce climate mitigation efforts (Newell, 2019). Additionally, their existing investments in conventional energy technologies create a resistance to change, as the shift to renewables could render their current assets obsolete, thereby threatening their profitability. As such, these incumbent actors may engage in lobbying efforts and political maneuvering to maintain the status quo, hindering the implementation of policies that support timely low carbon transitions. While it is difficult to measure the impact of lobbying efforts, recent investigations have found that companies whose stock values are negatively impacted by climate policies are more likely to have higher expenditures on lobbying (Lantushenko & Schellhorn, 2023). In Canada, for example, 11, 452 lobbying contacts with the fossil fuel industry were held between 2011 and 2018 (Graham et al., 2020), with the Canadian Association of Petroleum Producers holding more meetings with the federal government in 2020 than any other year on record (Woodside et al., 2023). Similarly, in international contexts, in recent climate change conferences, such as the most recent COP28 and COP29 saw an unprecedented number of lobbyists with fossil fuel ties in 2023 (Kick Big Polluters Out, 2023; Noor, 2024). Such lobbying efforts coincide with continued subsidization of

the fossil fuel industry across many national and local contexts, e.g., in Canada federal and provincial governments are estimated to provide CAD 4.8 billion per year through tax deductions and direct cash transfers (Corkal & Gass, 2020). Overcoming highly the entrenched power of incumbent actors is crucial for accelerating transitions to a sustainable and low-carbon energy future.

The urgency and challenge of addressing the climate crisis is daunting, especially considering the complexities and obstacles surrounding energy transitions. The following section describes the dominant approaches responding to these challenges, including a discussion of key strategies, successes, and limitations.

2.1.2 Dominant approaches to energy transitions

Broadly speaking, energy transitions include increasing renewable and low carbon energy supply while reducing overall energy demand. On the supply side, this involves a shift towards energy sources that are naturally replenished, including solar, wind, hydro, geothermal, and biomass, and may include further technologies that reduce greenhouse gas emissions, including nuclear and carbon capture and storage technologies (IEA, 2024). According to the IPCC, limiting global warming to 1.5°C requires renewables to supply 70% to 85% of electricity by 2050 (IPCC, 2018). On the demand side, this involves energy efficiency (i.e., using less energy to perform the same tasks) in buildings, transportation, and industrial processes, as well as demand-side management strategies to manage energy demand more efficiently. Researchers have described these two components as “double down, triple up,” where doubling energy efficiency and tripling the deployment of renewable generation are “amongst the most important levers to cut greenhouse gas emissions” (COP28, IRENA, & GRA, 2023, p. 9-11)

In order to encourage action across these two components, governments employ a multitude of tools to intervene in energy systems to encourage innovation across energy supply and demand spheres, ideally, in an integrated energy planning strategy that considers whole energy systems. While an exhaustive list of approaches is outside the scope of this dissertation, these tools may include a wide variety of regulations and policies (Daszkiewicz, 2020). Regulations include voluntary or mandatory standards to guide and control various aspects of the energy sectors, e.g., renewable energy standards, which mandate that a certain percentage of energy must be generated from renewable sources within a specific timeframe, thereby pushing utilities and the energy sector as a whole (IEA, 2017); and building energy codes, which implement energy performance standards for construction and renovation, leading to lower energy consumption and reduced greenhouse gas emissions from buildings (Wyse et al., 2025b). Policies may include financial incentives that coax businesses and individuals to adopt emerging technologies, e.g., incentives from multiple levels of government in Canada and the United States offer homeowners rebates and financing for enhancing home efficiency (Abhilash & Haley, 2022). Further, market-based policies, including carbon pricing schemes such as cap-and-trade systems and carbon taxes, aim to introduce accountability for carbon-related damage (Araújo, 2023), e.g., in Canada, the federal government's pricing system includes a fuel charge and performance-based system for industries, aiming to create a financial incentive for people and businesses to pollute less (Environment and Climate Change Canada, n.d.). Increasingly, tools for advancing energy transitions also involve a focus on education, information, and community-based approaches that encourage pro-environmental behavior and the involvement of a broad range of local actors. For example, utilities incorporate educational outreach and awareness campaigns and local governments are engaging

in various innovative governance approaches that involve various sectors in local climate and energy planning (Wyse et al., 2025a).

In the context of these global, state-level and local efforts, numerous successes in energy transitions are notable in recent years. On the supply side, renewable technologies have become increasingly cost effective and economically feasible. Since 2015, global solar PV capacity has increased by 400% and battery storage capacity by 2,500% (IEA, 2023). In the United States, renewable energy is the fastest growing energy source, increasing 42% from 2010 to 2020 with a record of over 256 GW of renewable power capacity added in 2020 (C2ES, n.d.); and in Canada, there is an installed renewable energy capacity of 21.9 GW, with 2.3 new installed capacity in 2023 (Canadian Renewable Energy Association, 2024). On the demand side, governments worldwide have helped mobilize USD 1 trillion for energy efficiency-related actions, with increased uptake of technologies such as electric vehicles and heat pumps, and reduced growth of global energy demand (IEA, 2023).

These successes are encouraging. Yet, despite the expansion of renewable alternatives, fossil fuel production continues to rise and investment in fossil fuels remains almost double that of renewable energy (COP28, IRENA, & GRA, 2023). Further, despite declining growth of energy demand, overall energy demand continues to rise and the reductions that have taken place may be a negative consequence of slowed economic growth—thus, short term savings can easily revert back to past patterns of behavior once economic crises ease (IEA, 2023). In addition to continued rise in GHG emissions, it should be noted that renewable and low carbon innovations remain linked with the potential for deepened societal injustices (Carley & Konisky, 2020). Resource extraction associated with renewable energy replicates continued patterns of colonial and extractivist practices (Kröger, 2020); the citing of renewable and low carbon projects overburdens low income

and racialized communities (Scott & Smith, 2017); and the low carbon technologies, which are accompanied by numerous co-benefits for health and wellbeing, are frequently inaccessible to low income people and racialized communities (Ramirez, 2021).

In this context, support for renewable and low carbon initiatives is often a challenge. At times, local people have legitimate grievances and concerns that are unfairly brushed off as NIMBYism. Such understandable concerns, however, may also be weaponized by powerful incumbents and political actors to further their own interests, e.g., U.S. president Donald Trump has repeatedly referred to clean energy as a "scam" and has recently signed executive orders halting renewable energy projects (Bapna, 2025); and when Doug Ford took power in Ontario, Canada, in 2018, his government similarly canceled numerous local renewable energy projects, including wind and solar initiatives that benefitted local communities, as part of a broader rollback of the province's green energy policies (Canadian Press, 2019). Broadly speaking, the failure to take local concerns seriously—including concerns about increased cost alongside broader affordability crises—has provided fuel to such politization of renewable alternatives.

2.1.3 Critiques of the dominant approaches: The need for structural transformation

Alongside heightened awareness that we are failing to meaningfully mitigate these ongoing crises, there are increasing voices who argue that the problems we face are *structural* (Angus, 2016; Huber, 2022; Stuart et al., 2020). That is, critics argue that the climate crisis is not incidental, but rather inherently intertwined with our presently existing political and economic systems (Becker & Naumann, 2016; Fairchild & Weinrub, 2017). While energy transitions within any economic system would be a challenge, critics argue that this challenge is far greater given that global climate goals are simply incompatible with capitalist logic, making this challenge far greater (Moore, 2016). Energy systems, these critics point out, are embedded within and constrained by the

boundaries of global capitalism (Becker & Naumann, 2016; Moore, 2017; Newell & Patterson, 1998), i.e., "the dominant organizing system of economic, social and natural life in modern societies" (Feola, 2020). Thus, underscoring the 'system-change' discourse, is the argument that efforts to address the climate crisis without confronting those broader issues will ultimately be unsuccessful. Two key systemic constraints include (1) endless economic expansion, which is the driving force of capitalism and climate change; and (2) the lack of democratic control over the economy, which is a unique characteristic of capitalism that impedes decisions made outside of profit-driven interests.

Concerning (1) economic expansion, critical theorists note that endless efforts of private owners to expand and increase their profits force a "perpetual treadmill of production and consumption" (Baer, 2012, p. 4). Notably, capitalism is the only system where resource production is driven by *unlimited* monetary accumulation[4]—by contrast, the other forms have natural constraints related to use (Huber, 2022). The endless growth imperative presents a key challenge for energy transitions given that the massive energy density and intensity of fossil fuels (including coal, oil, and natural gas) enables more economic output from each unit of energy input (Stuart et al., 2020). Thus, while fossil fuels may appear to be just another staple resource, their lack of substitutability compared to other resources means that our economy is uniquely dependent on fossil fuels. As Harrison (2015) explains:

> "Oil appears to be just another staple resource. Except that it isn't. There is something quite distinct about oil: it is, quite simply, the energy source that has made the modern

[4] Matthew Huber (2022), employing a Marxist lens, describes these processes in detail. Huber explores three specific forms through which resources are socially produced: (1) *production for use*, which involves production for direct use where resources are evaluated in terms of their potential to fulfil human needs; (2) *production for exchange*, which involves the development of a surplus and the exchange of commodities for commodities; and (3) *production for the accumulation of profit*, which involves production guiding by the pursuit of a money return on investment (i.e., the process of M-C-M, where money invested in commodities comes out with more money at the end of the process). In this last form, which is the capitalist form, all resource considerations are subordinate to the one question of whether resource production will produce monetary returns to investors.

> industrial (and post-industrial) age possible. People can substitute salmon for cod, or rice for wheat. They can substitute, in terms of building materials, wood for brick or straw for wood. But, as yet, there is no obvious or effective substitute for petroleum" (Harrison, 2015, p. 70).

Thus, unlike other staples, fossil fuels have been the primary driver of economic growth; this deep entanglement makes it far more difficult to replace fossil fuels—without severe contraction of economic growth—with alternative energy sources that may not offer the same energy density or scalability (Becker & Naumann, 2016). This has led ecological economists to argue that energy contributes more to economic growth than is assumed in the orthodox view of energy transitions. That is, the orthodox view, i.e., the primary informer of energy efficiency policies, asserts that energy is only a small share of total input in the economy, and thus increased energy consumption can only provide a small contribution to the growth in economic output; while the ecological economist view asserts that energy contributes more to the economy than is commonly understood. According to Sorrel (2015), understanding the debate between ecological and orthodox perspectives is important because "the feasibility of significant energy demand reduction may depend in part of which of these views is correct" (p. 76). That is, while many commentators expect that energy efficiency improvements and reduced demand will provide the dominant contribution to tackling climate change, reducing energy demand is likely more difficult than is commonly assumed. Importantly, economic growth has so far been inseparable from increased energy and material use (Sorrel, 2015; Ward et al., 2016). As such, if we continue to grow the global economy at current rate without decoupling these trends, we are likely to surpass planetary boundaries related to climate change, as well as biodiversity loss, freshwater use, and other critical ecological thresholds (Richardson et al., 2023).

In addition to these biophysical limits, the endless growth imperative of capitalism helps to explain the asymmetric political power of incumbent energy actors explained in section 2.1.1 of

this dissertation. That is, it is not just that fossil fuel corporations have greater capacity for lobbyists and political influence; it is also that, given that capitalist societies are inherently dependent on economic growth, a central role of the state is to advance the interests of capital (Newell & Peterson, 1998). In the context of energy, where fossil fuels hold such a unique position in our economy, this corporate power is even more pronounced. As Parenti (2011) describes,

> The close relationship between politics and economics is neither neutral nor merely coincidental. Governments evolve through history in order to protect accumulations of property and wealth … Many political scientists manage to ignore the relationship between government and wealth, treating the corporate giants, if at all, as if they were but one of a number of interest groups. They label as "Marxist" any approach that sees government as largely an instrument to protect the interests of wealth (p. 3).

Concerning (2) lack of democratic control of the economy, many critical theorists argue that our democratic institutions were designed specifically to constrain, rather than oppose, any democratic challenge to the market economy (MacPherson, 1965). That is, capitalist societies have constructed a boundary between the 'public' and 'private' sphere (Trend, 1996; Wright, 2021). The *public* sphere—the sphere that is deemed 'political'—includes laws, legislation, and some civil structures, where those affected by decisions are invited to participate (Wright, 2021); while the *private* sphere—a depoliticized economy—is mediated by the market where "individuals are free to do what they want without involving the democratic participation of those affected by their actions" (Wright, 2021, p. 17). It is precisely this understanding of 'the political' as a particular sphere quarantined from 'the economic' that characterizes capitalism (Huber, 2019). In other words, in liberal capitalist societies we have achieved (however inadequately) *political* democracy but not *economic* democracy (Parenti, 1997). In this context, workers and communities have little say over decisions that most impact their lives, e.g., how profits are distributed within economic enterprises (Wolff, 2012) and how—increasingly monopolistic—corporations set prices on goods that are essential for human flourishing (Glynn & Dearden, 2023). Thus, in energy systems,

energy-related decisions are based on profit incentives rather than the public good. Huber (2022) describes, "even if we have the technological machines and skills to produce useful properties from a forested landscape or a mine; even if there exists a culture of risk-taking; if enough investors with money capital do not think it worth the investment, these resources will not be produced" (p. 167).

The impact of these democratic constraints is far-reaching. Political democracy, being confined to the 'public' sphere where it is unlikely to wield real power (Trend, 1996), is therefore rendered "a mere formality without substance" (Wolff, 2012, p. 111). Politics is instead reduced to the ritual of elections, where there is an appearance of different opinions, but the overall paradigm is the same (Wolin, 2017). Arguably related to these constraints, we are currently living at a time of growing disillusionment with liberal democratic politics (Foa & Klassen, 2020; Wike & Fetterolf, 2021) that not only contributes to disengagement, apathy and nihilism (West, 2004), it may contribute to the ongoing rise of demagogic leaders and right-wing populism (Mouffe, 2005). People who have long been disenfranchised under our existing political systems risk becoming 'seduced' by right-wing saviours who promise to give power back to 'the people' (Mouffe, 2005). In the context of energy transitions, the rise of right wing populist parties creates further barriers to transitions as they tend to oppose and contribute to polarization on climate and sustainability policies (Fraune & Knodt, 2018).

It should be noted that even among these critics, there are widely varied recommendations for how to address the capitalism's structural causes of the climate crisis. For instance, while scholars like Jason Hickel argue for degrowth, i.e., a reduction in global consumption and production, especially in the Global North, to bring human activity back within planetary boundaries (Hickel, 2020), Matthew Huber focuses more on the specific class structure of capitalism, advocating for a

working class movement that seizes control of energy production and distribution through large-scale socialist industrial planning (Huber, 2022). Despite of these differences, it is agreed that overcoming climate and ecological crises requires *structural* transformation as we transcend global capitalism towards a new economic system (Angus, 2016; Huber, 2022; Stuart et al., 2020). Sweeney (2017) argues that this new 'system-change' paradigm challenges "the very idea that capitalism might be capable of decoupling growth from emissions and other environmental damage or that there can be, even in theory, some version of "steady state" capitalism that more or less constrains the political economy within the confines of planetary limits" (p. 114). By contrast, although sustainable transitions theory is increasingly wrestling with issues of political power, i.e., conceptualizing resistance by incumbent regime actors (Geels, 2014), the literature has been resistant to critical analysis and criticism of capitalism (Feola, 2020) and instead remains dominated by theories of change grounded in neo-liberal theory (Newell, 2021). The energy sector is commonly framed as a depoliticized space of technocratic decision-making (Schulz & Siriwardane, 2015), and conventional narratives surrounding energy transitions are that energy systems can be transformed while sustaining existing political and economic structures (Burke, 2018). It is in this context that 'energy democracy,' as a social movement and concept in energy transitions research, presents a unique vision forward.

2.2 Energy democracy

The struggle is not simply to de-carbonize the economic system, but to transform it (Weinrub, 2014).

2.2.1 Origins of the energy democracy movement

The energy democracy movement emerged from on-the-ground activism, including radical intellectual circles, unions, and communities of colour (Lennon, 2021; Szulecki, 2018). For several decades before the concept arose, communities on the front lines of environmental harm organized

collectively to fight unjust environmental burdens (Cole & Foster, 2001). Grassroots struggles, for example, arose from residents in "sacrifice zones," referring areas where low income and racialized communities shoulder more than their fair share of environmental harm (Lerner, 2012). Sacrifice zones are linked with disparities in wealth and power, where the communities facing disproportionate burdens—often including low income and/or racialized peoples—tend to be the least able to participate in decision-making or challenge injustices (Scott & Smith, 2017). Through on-the-ground struggles confronting these injustices, activists organized around the environmental justice principle, "no decisions about us without us" (Mascarenhas-Swan, 2017). In other words, communities have sought a more active role in decision-making as a means of enabling more just outcomes. Energy democracy is thus seen—at least in part—as an extension of these struggles and a response to the existing energy regime (van Veelan & van dur Horst, 2018), where activists have presented an alternative to these unjust arrangements in the energy sector (Fairchild & Weinrub, 2017).

The specific term, *energy democracy*, appeared in organizational documents from groups arguing energy democracy provides an alternative path forward, where local communities become active participants in energy decisions that affect them (Sweeney, 2012). In other words, energy democracy emerged as strategy to do subvert injustices in the energy sector while addressing the climate crisis. Activists describe how energy democracy offers an opportunity for groups to mobilize around a political principle, rather than the apolitical narrative surrounding renewable energy that has thus far been unable to mobilize masses of support (Angel, 2016; Burke, 2018). Notably, the narrative was more than a call for broader participation, but a "structural fight" to oppose and reshape the existing regime (Scheer, 2010). For example, Trade Unions for Democracy, a global coalition of trade unions organizing workers in support of climate action,

called for a three-prong approach to "resist the agenda of the fossil fuels corporations," "reclaim to the public sphere parts of the energy economy that have been privatized or marketized," and "restructure the global energy system" (Sweeney, 2012, ii). They argue that "an energy transition can only occur if there is a decisive shift in power towards workers, communities and the public sector—energy democracy" (p. ii). Similarly, in a recent webinar from the Energy Democracy Project—a collaborative network of more than 30 diverse, local, frontline organizations across the United States advancing energy democracy—organizers describe energy democracy as a reimaging of energy systems that shifts power from corporations to communities so that local people no longer depend on corporate and centralized structures that are driven by profit over people. In an energy democracy future, organizers envision a system that is accountable to the communities it serves, and where "no community is a sacrifice zone" (Energy Democracy Project, 2024)

In the context of struggles for environmental justice, energy democracy in-practice has involved a multitude of actors who oppose the existing structure of energy systems and seek to challenge that structure by transferring energy ownership to workers and communities. As cited by Feldpausch-Parker et al. (2019), in a report from an international energy democracy workshop, Angel (2016) wrote:

> *From energy access to climate justice and from anti-privatization to workers' rights, people across the world are taking back power over the energy sector, kicking back against the rule of the market and reimaging how energy might be produced, distributed and used. For many (but not all) movements involved in struggles around energy, the concept of energy democracy is proving increasingly useful as a means of bringing together disparate but clearly linked causes under a shared discourse and, possibly, something of a common agenda. (p. 3)*

2.2.2 Energy democracy as a theoretical concept

Following the emergence of energy democracy as a social movement, there has been a rise of literature aiming to understand it as a theoretical concept since 2017 (Wahlund & Palm, 2022). Researchers have sought to provide a clear definition of the concept (Szulecki, 2018), investigate what is 'democratic' about energy democracy (van Veelaen & van der Horst, 2018), and interrogate whether the concept is truly distinct within energy transitions scholarship (Droubi et al., 2022; Wyse & Das, 2024). Advocates of energy democracy, however, have generally resisted a static and narrow definition, arguing doing so risks flattening the richness and differences in energy democracies across localized struggles (Chilvers & Pallet, 2018). Rather, energy democracy may be seen as "an ongoing active process that is enacted through on-the-ground struggles in myrid contexts" (Gomez & Endres, 2022). Energy democracy has been loosely defined as an emergent social movement (Feldpausch-Parker et al., 2019; Burke & Stephens, 2018), where citizens are imagined as active participants in the ownership and control of whole energy systems, from energy production through to consumption (Feldpausch-Parker et al., 2019; Szulecki, 2018).

Researchers have identified two common features of energy democracy: *collective ownership* and *democratic control* of energy, where these features are seen as a strategy to structurally reshape our energy systems (Sweeney, 2012; Van Veelen & van der Hurst, 2018; Stephens et al., 2018; Wahlund & Palm, 2022). Burke & Stephens (2018) describe these as "commonalities" that hold the energy democracy agenda together. The following section provides in-depth consideration of these interrelated features, followed by a description of how they may contribute to a structural transformation of energy systems.

2.2.2.1 Collective Ownership

Energy democracy emphasizes that conventional energy technologies based on concentrated energy sources "ultimately and over time organize and enable more concentrated forms of power and centralized or authoritarian political relationships, and vice versa" (Burke and Stephens, 2018, p. 82). This tendency can be seen in presently existing energy systems. In Canada, for example, ownership and control of the oil and gas sector is highly concentrated with a small number of major producers (Carroll & Huijzer, 2018). Relatedly, Canada—specifically, Canadian provinces highly dependent on oil and gas—has exhibited traits of a petrostate, including democratic deterioration as oil-wealth rearrange state-citizen accountability links (Carter, 2020). By contrast, renewable energy and many associated technologies offer the potential for alternative ownership structures. That is, in addition to the advantage of fuel switching, renewable energy includes distributed renewable resources and modularity of their enabling technologies (Burke & Stephens, 2018), which present an alternative of reclaiming ownership of energy for workers, households, and communities (Bozuwa, 2019). For example, distributed generation, smart grid technology[5], micro grids[6], and peer-to-peer trading[7] (Lowitzsch, 2019), can be deployed in different areas and by different categories of investors than large scale, conventional sources such as coal and gas (Szulecki, 2018).

These possibilities for reconfiguring ownership and control follow in the footsteps of longer running scholarship that emphasizes how technological choices are also political choices—it is this dynamic that explains why renewable technologies are connected to politically-driven social

[5] Smart grid technology enables active interface between supply and demand sides in energy value chains (Lowitzsch, 2019)
[6] Microgrids are groups of "interconnected loads and distributed energy resources within a clearly defined electrical boundaries that act as a single controllable entity with respect to the grid" (Lowitzsch, 2019, p. 52).
[7] Peer-to-peer trading involves prosumers using blockchain technology, which relies on a shared ledger where transactions are tracked by all parties in a decentralised fashion (Lowitzsch, 2019).

movements like energy democracy. Lovins (1979), for example, argued that due to their small scale, technical simplicity, and geographic spatiality, renewable energy systems are structurally suited toward more participatory and less coercive governance structures. This is contrasted with fossil fuel and nuclear technologies that necessitate massive investments in centralized ownership of infrastructure, thereby tending toward strongly interventionist central control, concentration of political and economic power, and the requirement of elitist technocracy "whose exercise erodes the legitimacy of democratic government" (p. 148). It is this flexibility that enables the potential for alternative ownership models, thereby restructuring ownership of energy systems and shifting political power away from the dominant actors that have both impeded energy transitions and have systematically harmed and excluded many communities.

While energy democracy is linked with calls for *decentralised* ownership structures (Szulecki & Overland, 2020), it is more specifically associated with various forms of *collective* ownership (Wahlund & Palm, 2022, i.e., socialized ownership, where resources and means of production are collectively held or managed. This stands in contrast with closely related concepts such as energy citizenship, which tend towards individual acts of participative consumption and production of energy, and individual behaviour changes at the household level (Wahlund & Palm, 2022). Different forms of collective ownership can exist, ranging from models of community ownership to state ownership (Wily, 2018). In community-based ownership models, which energy democracy is most commonly associated, local residents collectively own and control the energy generation, distribution, and/or storage infrastructure (Wahlund & Palm, 2022). They may be organized in a variety of organizational structures, including cooperatives, i.e., member-owned organizations where individuals come together to collectively own and manage energy resources (Ecology Action Centre, 2024); nonprofit organizations, where—at least in theory—organizations sprout

from a community of interest and aim to collectively improve society (Pratt, 2019); or community investment models, where communities raise capital through crowd funding and community investment (Monk, 2020).

Community ownership arrangements are seen as a potential instrument for achieving numerous local benefits for participants (Moss et al., 2014), including material benefits such as local investment and generation of community wealth (Lennon, 2017), as well as benefits that are somewhat less tangible, including local acceptance of energy transitions, knowledge and skills development, and increased social capital and trust (Hogan, 2024). Benefits such as these reflect long-held claims in critical theory, where private ownership of the means of production is associated with alienation of workers, i.e., a feeling of disconnection, estrangement and isolation experienced by individuals in modern capitalist societies (Harvey, 2014; Marx, 1844). In a system of private ownership, individuals have little control over what they produce, how it's produced, and for whom it's produced. This lack of control is linked to a sense of detachment from production as well as the natural world, where disconnectedness from nature contributes to understanding natural resources as commodities (Harvey, 1996; Harvey, 2014). Collective ownership of energy, by contrast, potentially enables reconnection to natural resources by making energy resources visible and tangible (Hogan, 2024). Through this reconnecting, collective ownership is associated with transformative possibilities, such as decommodifying the provision of energy (Becker, Naumann, & Moss, 2017) and post-growth economies, i.e., beyond the endless growth paradigm of capitalism (Kunze & Becker, 2014).

It may be noted that some scholars argue collective ownership should not strictly be focused on the local level. Becker (2017), for example, explains how establishing sovereignty may pertain to the state. For example, progressive governments in South America, e.g., Ecuador, Bolivia, and

Venezuela combine the idea of energy sovereignty with post extractavist development models. In these cases, state ownership can play a crucial role towards resource and land control, thereby challenging colonial, and multi-national corporations power in the region. Thus, in this context, some scholars wrestling with continued neocolonialism in green transitions emphasize both national sovereignty and popular sovereignty, i.e., empowerment of local communities to decide their own energy future (Hamouchene & Sandwell, 2023). Visions for state and community based ownership are contested, with some scholars raising concern with the localist approaches that dominate energy democracy scholarship. On the one hand, state support may be essential for prevent vulnerable communities from falling behind (Catney et al., 2014), and may be linked with greater levels of energy justice in some contexts (Wyse et al., 2021). In some contexts—particularly in south America—state-based ownership models and nationalisation have also played a key role in challenging corporate dominance and supporting social welfare (Chavez, 2018).

On the other hand, the disproportionate levels of political power incumbent energy actors have over state decisions, in combination the top-down nature of centralized ownership, may make it unlikely state ownership will make decisions that meaningfully oppose private interests (Newell & Paterson, 1998). Thus, debates pertaining to community vs state ownership as forms of collective ownership largely hinge on the level of democratic control that is likely to be permitted.

2.2.2.2 Democratic Control

Energy democracy emphasizes democratic control over energy-related decisions. Democratic control stands in contrast with existing understandings of energy through a market paradigm, where energy is seen as a private commodity to be exchanged for profit (Goldthau, 2014). In this 'private sphere' of the market, "individuals are free to do what they want without involving the democratic participation of those affected by their actions" (Wright, 2021, p. 17). While a regulated

energy market may constrain the worst excesses of capitalism by imposing standards and price controls to align with environmental and social goals (Farley et al., 2021), energy democracy scholarship argues that the commodity paradigm is fundamentally flawed and government regulation continuously fails to protect the environment and people (Martinez, 2017). Energy democracy proponents alternatively emphasize that the natural endowments that compose energy should operate democratically in support of the commons, rather than being exclusively controlled (Martinez, 2017; Van Veelen & van der Hurst, 2018). This 'energy-as-commons' approach sees energy as a public good before a commodity (Burke & Stephens, 2018), and thus, economic decision-making power should be distributed by making citizens into recipients, stakeholders and accountholders (Wahlund & Palm, 2022). In other words, as the previous section suggests, while *democratic control* is a distinct feature of energy democracy, it is interconnected with *collective ownership* models. That is, collective ownership enables citizens to have a say, as active stakeholders, in how energy resources are used and who benefits. While alternative approaches to community engagement and consultation may involve local people in decisions, e.g., commonly used participation frameworks such as the IAP2 spectrum that establishes 'best practice' consultations but may involve a narrow scope for transformative participation (Legacy et al., 2023), as part-owners, collective ownership enables a level of democratic control other models are highly unlikely to achieve. Thus, the style of democracy underpinning the energy democracy is primarily 'associative', meaning that decisions are managed by voluntary and democratically self-organising associations (van Veelen & van der Horst, 2018).

Emerging low carbon energy technologies that support collective ownership also have the potential to enable more radical and deliberative modes of democracy, thereby reasserting democratic control over energy systems. For example, in contrast with private ownership, actors

such as cooperatives, social enterprises, and municipalities may employ a variety of democratic attributes or structures—cooperatives, which are owned and governed by their members, typically follow the principle of 'one member, one vote' (International Co-operative Alliance, n.d.); and social enterprises and municipalization potentially enables more direct citizen influence and accountability in decision-making. Notably, democracy theorists have long argued that democracy at the local level has long been argued to be more achievable (Dewey, 1927). This is asserted for a variety of reasons, including that local communities are often smaller and more homogeneous, making it easier for residents to engage in political decision-making (Kouba & Dosek, 2021); and the physical proximity between electors and elected officials, which fosters direct interaction and reduces bureaucratic complexities (Falanga, 2024). Importantly, however, collective forms of ownership do not guarantee democratized control, and researchers have documented how the same patterns of regulatory capture at higher levels government can be found at the local level (Wyse et al., 2025). In this context, energy democracy scholars have noted how struggles against privatization are often undermined by corporate control of the state institutions, including at local levels (Weinrub, 2014), therefore calling for "the urgent need to assert democratic control and direction over major energy entities—and to put the public back in public ownership" (Global Labor Institute, 2012 as cited by Weinrub, 2014).

It is not simply the opportunity for more democratic procedures in and of itself. Energy democracy organizers note that investor-ownership *necessitates* decisions based on profit because the goal is to generate financial returns (Next System, 2024). By contrast, collective ownership and democratic control—at least in theory—opens the possibility for other motivations, such as providing essential services, ensuring equitable access, and supporting community well-being.

Thus, collective ownership coupled with democratic control offers the potential to challenge a new social vision beyond the dominant capitalist system (Burke, 2021).

2.2.2.3 Structural Transformation

According to energy democracy proponents, it is these combined features—both collective ownership and democratic control—that amount to structural transformation of energy systems. These features stand in direct contrast with the concentrated and corporate ownership and control of existing energy systems, and the violence that has been imposed on communities within these structural arrangements (Weinrub, 2014). To fully understand energy democracy's potential contribution to structural transformation, however, it is important to note energy democracy's interlinkages with a broader project for expanding political and economic democracy (Weinrub, 2014). That is, energy democracy is a *component* or *subset* of broader struggles to democratize the economy, i.e., 'economic democracy' (Fairchild & Weinrub, 2017; Sweeney, 2012; Stuart et al., 2020), i.e., an alternative to capitalism wherein people have formal decision-making power in their core economic associations (Malleson, 2014; Schweickart, 2011). Energy democracy scholars remind us that democratic energy initiatives arise within capitalist processes and while they may form part of a transformational response to the contradictions of the current system, the transformational potential is limited without democratic control of resources and the mechanisms of production more broadly (MacArthur, 2016). Thus, energy democracy is not simply advocating for "meaningful processes of community engagement in an inherently undemocratic system" (Martinez, 2017, p. 27), but is a part of greater effort to transform that system.

To that end, some critical theorists have begun to move beyond vague calls for 'system change' to better articulate what policies and programs activists should focus their advocacy—energy democracy is seen as a component of these efforts. Stuart et al. (2022), for example,

includes energy democracy—including various forms of socialized ownership—alongside economic democracy, work-time reductions, and nationalizing and phasing out fossil fuel companies. Energy democracy is argued to be so important for these broader efforts because socializing and/or democratizing energy enables the possibility to challenge the economic growth imperatives, where energy is primarily seen as a capital accumulation strategy. Stuart et al. (2020) explains, "Because growth-dependency relies on the private ownership and control of productive technologies, addressing the issue of ownership and control is especially important to begin intentionally contracting total energy use" (p. 102).

In summary, the energy democracy movement is argued to contribute to system-change goals by tackling the structural makeup of existing energy systems, which the dominant approaches to transitions neglect (outlined in Section 2.1.3 of this dissertation), i.e., endless economic expansion and the lack of democratic control over the economy. Despite these potentially transformative aspects, however, understandings of energy democracy's contribution to these broader efforts—i.e., connections outside of the energy sector—remain largely underdeveloped in energy transitions literature.

2.2.3 Critiques and limitations

Energy transitions scholarship includes conceptual critiques pertaining to energy democracy. For example, Droubi et al. (2022) present a critical review of energy democracy, arguing that the concept falls short of other equity related concepts, e.g., energy justice, due to its lack of conceptual clarity and a false assumption that democratic principles sufficiently deliver justice. They argue that "democratic processes have brought Western countries, and countries that adopt the Western model of democracy, to the situation of *inequality* and *injustice* that they experience. How exactly could further reproduction of these processes on smaller scale (energy) deliver more justice?" (p.

2). Further, energy democracy faces limitations in-practice. According to MacArthur (2016), local initiatives, 'in theory,' can lead to local empowerment, but 'in practice,' poor designs and limited local capacity can undermine public trust. In such cases, participation may be more harmful than not, i.e., "feelings of manipulation, wasted time and 'business as usual' are problematic and can, counterproductively, lead to deepened cynicism" (MacArthur, 2016, p. 638). Catney et al. (2014) explains how local democratic energy initiatives require support from higher levels of government to avoid deepened inequities. These authors explain how there are two visions of localism: a 'positive vision,' in which the turn towards community is seen as a response to the legacy of neoliberalism and growing societal inequities; and a 'negative' vision, in which the turn towards local is a new phase of neoliberalism that enables new regimes of capital accumulation—in that latter vision, decentralization could deepen inequalities without support from higher levels of government. Further, local democratic energy initiatives may struggle to involve working people who are struggling with material needs may have less time to contribute, leading to the "usual suspects" in democratic initiatives (Burka & Creamer, 2018). In addition to local struggles, there are concerns from on-the-ground activists that global justice along energy supply chains may be underemphasized. For example, BLM activists warn that solar production can cause significant harm to Global South communities, which "problematizes any effort to make Black Lives Matter by democratically provisioning renewable energy technologies" (Lennon, 2017, p. 23).

In the context of conceptual confusion and practical limitations, energy democracy has also been susceptible to co-optation, as governments employ the language of energy democracy and community energy without incorporating their more transformative features. Local government initiatives toward collaborative governance, for example, have seen a watering down of more transformative aspects of energy democracy (Berthod et al., 2022). Kunze and Becker note these

difficulties are related to "how to possibly contribute to an overall transformation of the market-based and profit-dominated social system, i.e., the realities of capitalism" (Kunze & Becker, 2015). They therefore caution against "naïve optimism" for the movements transformative potential.

In summary, while this dissertation certainly takes on a sympathetic and supportive stance pertaining to energy democracy, it is important that researchers and organizers alike take these critiques seriously. As of yet, it remains unclear how locally rooted democratic initiatives may challenge the massive global structures of power that dominate energy systems, and many of the limitations noted by researchers remain underexplored. It should be noted that energy democracy remains quite recent, with most less than 10 years old. With that in mind, the following section explores energy democracy through the lens of broader social movements that aim to prefigure a democratic economy, wherein these broader literatures and their extensive histories with on-the-ground practice and experimentation have gone further to consider many of the questions now arising in energy democracy literature.

2.3 Prefigurative social movements

As was described in the introduction of this dissertation, the concept of 'prefigurative social movements' (also known as prefigurative politics) is used to describe a type of social movement in which individuals or groups embody the principles and values they advocate for in their present actions and organizational structures, while aiming to extend local practices to foster broader systemic change. It has been defined as "experimental implementation of desired future social relations and practices in the here-and-now" (Raekstad & Gradin, 2020). Importantly, prefigurative social movements are associated with imagining, enacting, and extending emancipatory social relations that are consistent with a more egalitarian political and economic system.

Before exploring the concept in detail, however, it may first be noted that 'social movement', itself, is somewhat of a nebulous concept. At a high level, a social movement refers to a collective effort by a group of individuals to bring about social change (Edwards, 2014). Some scholars argue for a distinction between social movements and economic movements. For example, according to Dodaro & Pluta (2012), social movements may be heavily dependent on a shared vision and goal that entails idealism and critique, and they primarily promote change through political action like protest and advocacy. Economic movements, on the other hand, bring about change by means other than political action. They originate in response to the failure of existing economic conditions and, like other social movements, include a shared vision or goal, strive for change through mobilization and allocation of resources. Thus, while this dissertation—following other energy democracy researchers—refers to energy democracy and other prefigurative social movements as 'social movements,' it is worth highlighting this potential distinction given predominant understanding of social movements merely as protest and advocacy-based efforts.

2.3.1 Conceptual origins

Although the term 'prefigurative politics' has grown in popularity over the last 20 years (Jeffrey & Dyson, 2021; Maeckelbergh, 2016), it was first used in its current sense by Carl Boggs in 1977. Like many critical social theorists during this time, Boggs sought to wrestle with the perceived failures of the dominant anti-capitalist tendencies of the 20th century, i.e., Marxist-Leninism, social democracy, and anarchism (also known as libertarian socialism). In his seminal text, *Marxism, prefigurative communism, and the problem of workers' control*, Boggs (1977) interrogated strategies from these tendencies to better conceptualize an approach for transitioning to a post-capitalist world. In other words, the concept of prefiguration may be understood as a theory of change for how to achieve structural transformation in the dominant capitalist system.

Before articulating the theory of transformation associated with prefigurative social movements, it is first important to outline the agreed upon goals among the three anti-capitalist tendencies addressed within Boggs' critique. Generally speaking, Marxism, social democracy, and anarchism share common critiques of capitalism and share a vision for a future society, i.e., a classless society where workers, rather than capitalists, own and control the means of production (Franks, 2012; Morley, 2011). Where they diverge, as explained by Boggs (1977), are their approaches to achieving societal transformation. Marxism advocate for a revolutionary overthrow of capitalism through the establishment of a vanguard party, i.e., a disciplined revolutionary organization, that leads the working class through a transition to socialism. Social democrats take a more reform-oriented stance, aiming to mitigate capitalism's inequalities through government regulation, social policies, and welfare programs while maintaining a mixed economy with private enterprise. Anarchists, on the other hand, reject the idea that any centralized authority and hierarchical structure (e.g., a vanguard party) would lead to a more equitable world and are also skeptical of engaging with state actors. They therefore seek to erode capitalism through the creation of decentralized, non-hierarchical, and voluntary associations. These variations in strategy—while highly simplified for the scope of this chapter—reflect the three primary tendencies of socialist thought.

Given the overlap between prefiguration and anarchist thought, prefigurative social movements are often seen as an extension of anarchism and are now widely associated with 'new anarchist' or anarchist-adjacent organizing (Graeber, n.d.; Fians, 2022) – "anarchism is the heart of the movement, its soul" (Graeber, n.d.). Anarchists such as Peter Kropotkin, for example, argued that the goals of a movement must be embodied in its practice (as cited by Jeffrey & Dyson, 2021, p. 643). In contrast with vanguard revolutionary approaches, anarchists argued that the means of

change should be consistent with the desired ends of a movement and should be practiced in the present, without necessarily waiting for a revolutionary disruptive event. That is, anarchists were skeptical that a social movement organized in unfree and authoritarian ways it would ever give up this power to achieve the free future it envisioned. Emma Goldman (1924) argued, "Today is the parent of tomorrow. The present casts its shadow far into the future … revolution that divests itself of ethical values thereby lays the foundation of injustice, deceit, and oppression for the future society" (p. 530). Put differently, the means-ends coherence emphasized in anarchist thought is reflective of what today might be called a path dependency between revolutionary practices and results, where initial moves build a trajectory of change (Gordon, 2018). Importantly, this specific idea is traditionally seen as the key point of contention between anarchist and Marxist thinkers (Monticelli, 2021), e.g., the debate anarchists and Marxists in the First International[8] was centered around 'social change from below' versus reinforced centralization. Mikhail Bakunin (1871) argued that the International should organize the masses 'from the bottom up, beginning with the social life of the masses and their real aspirations" and "not by forcing the natural life of the masses into the straitjacket of the State" (p. 529). Thus, anarchists generally oppose social and economic oppression in all its forms, including opposition to both capitalism and the state.

Boggs (1977) critiques the theory of change associated with each of these three tendencies, ultimately arguing for a more flexible approach that borrows primarily from anarchist thought, while emphasizing the need to incorporate other strategies. First, Boggs critiqued Marxist-Leninism by arguing this theory of change involves an authoritarian and power-oriented strategy and thus represses the democratic and emancipatory side of Marx. This strategy has led to

[8] The First International, officially known as the International Workingmen's Association (IWA), was founded in 1864 as a coalition of socialist organizers, including, communist, anarchist and labor groups aimed at uniting workers across different countries to fight for labor rights and social justice.

bureaucratic hierarchy, a powerful centralized state and a social division of labour that maintains the characteristics of bourgeois society. According to Boggs, "having smashed the authoritarian state, the Bolsheviks soon recreated it" (p. 101). Second, Boggs argued that structural reformism, i.e., social democracy, seeks to by-pass the extremes of Marxist-Leninism by participating within and extending forms of bourgeois democracy. This strategy, involving the institutionalization of working-class politics, has failed to escape bourgeois politics and only reinforces capitalism. Third, Boggs argues that anarchists tend to ignore the state and the problem of power by rejecting both the vanguardism of Marxist-Leninism and the democratic engagement of social democrats: "in stressing the prefigurative side, they downplayed the task of organization" and "as history shows, local structures are unable to translate popular energies into a sustained movement that is both prefigurative and *politically effective*" (p. 120). Boggs (1977) notes that wherever anarchist movements were "not destroyed by the bourgeois state or by organized Marxist parties, it fell prey to its own spontaneism, or would be absorbed into established trade union, part and state institutions" (p. 100). Following from these critiques, Boggs advocates for an alternative *prefigurative* strategy. That is, rather than top-down structures imposed on the masses, local structures would shape the revolutionary processes and centralized structures would emerge out of these struggles as coordinating mechanisms. Boggs argues that "only popular institutions in every sphere of daily existence" … "can fight off the repressive incursions of bureaucratic centralism and activate collective involvement that is the life-force of revolutionary practice" (p. 121).

In summary, while the specific concept of prefigurative politics emerged with Carl Boggs, it follows most closely with the anarchist tradition of the late 19th and early 20th century—albeit with modifications aimed at wrestling with political power, which anarchists are commonly criticized for ignoring. Thus, the 'prefigurative' concept points not only toward the enactment of

alternative practices, but also to strategies to extend these practices to challenge th dominant system and foster broader systemic change.

2.3.2 Prefiguration in contemporary theory and practice

Recent scholarship employing the concept 'prefigurative politics' has begun exploring both what prefigurative practices look like, as well as how they may (or may not) contribute to a broader societal transformation. The following sections: (1) define prefigurative practices, (2) outline prefigurative strategies to advance these practices outside their local context to foster broader systemic change, and (3) explore the recent growth of prefigurative social movements.

2.3.2.1 Enacting Alternative Practices

The enactment of alternative practices refers to how actors structure themselves to embody the values and principles they aspire to see in a future, transformed society (Raekstad & Gradin, 2020). Values associated with prefigurative politics include, for example, equality, where all people have equal access to the social and material means necessary for a flourishing life; and democracy, where all people have equal access to the exercise of power, i.e., they are able to meaningfully participate in all decisions that significantly affect their lives (Wright, 2021, p. 9-21). What prefigurative practices have in common, Wright argues, "is the idea of building alternative institutions and deliberately fostering new forms of social relations that embody emancipatory ideals" (Wright, 2010, p. 324). That is, these practices embody alternative moral values rather than reproducing the values of capitalist logic, e.g., hierarchy, competition, and profit maximization.

In practice, alternative practices may include, for example, forming worker and consumer co-ops (noted to be the most 'quintessential' prefigurative activity), worker factory councils, civic environmental councils, and ecovillages or transition towns, and a variety of mutual aid organizing strategies (Schiller-Merkens, 2022). For example, worker cooperatives and factory councils—

rather than exhibiting social relations between workers and capitalists—operate democratically where workers collectively own the means of production in their own workplace (Keith, 2017). Similarly, civic environmental councils and ecovillages prioritize local and community-driven priorities, rather than being profit-driven, and often involve communal decision-making (Wright, 2010). The institutional focus of prefigurative social movements is small, local, collective organs of popular control that seek to democratize and reinvigorate revolutionary politics (p. 104). While not necessarily being explicitly anti-capitalist, these institutional forms exhibit social relations that are inherently non-capitalist. For example, worker cooperatives and factory councils—rather than exhibiting relations between workers and capitalists—operate democratically where workers collectively own the means of production in their own workplace (Alperovitz, 2017). Similarly, civic environmental councils and ecovillages prioritize local and community-driven priorities, rather than profit-driven, and often involve communal decision-making (Wright, 2010). By intentionally establishing these alternative institutions, these practices create tangible examples of the desired social relations and values, serving as both a critique of existing oppressive structures and a blueprint for a more just and equitable society (Hammond, 2015).

2.3.2.2 Extending Alternative Practices

The extension of alternative practices refers to how actors advance practices beyond their local contexts in an effort to challenge the binding constraints of capitalism and foster broader systemic change. That is, if one accepts the vision advanced by prefigurative politics, how could such a transformation be achieved? Scholars and practitioners of prefigurative strategies refer to two concepts related to transformation: interstitial transformation, involving traditionally anarchist notions of progressively enlarging spaces of social empowerment; and dual power, involving developing alternative bottom-up structures of power through broader coalitions and organizing.

First, the concept of interstitial transformation refers to the theoretical means of social transformation by progressively enlarging spaces of social empowerment. The idea is that by actively engaging in and expanding prefigurative practices—such as the formation of worker cooperatives, intentional communities, or other forms of grassroots organizing—new forms of social empowerment may be created and expanded in the niches and margins of capitalist society "that cumulatively generate a qualitative shift in the dominant social system" (Wright, 2010, p. 303-305). These practices serve as both practical manifestations of the desired social relations and as spaces where people can experience empowerment and solidarity. Rather than seeking to replace the entire capitalist system in one dramatic upheaval, interstitial transformation involves a continuous process of building alternatives within the existing framework. As these alternative practices gain momentum and visibility, they shift cultural and societal norms, and are argued to erode the influence and legitimacy of capitalist structures. Kallis (2018) describes such practices as "reforms that, if they were to be implemented, would require the very contours of the system to change radically to accommodate them. And reforms that, simple and commonsensical as they are, expose the irrationality of the system that makes them seem impossible" (p. 18). The transformation is gradual, happening through the proliferation of decentralized, democratic, and non-hierarchical forms of social organization that gradually displace the prevailing capitalist logic. In essence, interstitial transformation suggests that creating and expanding spaces that prefigure a more just and equitable society can, over time, contribute to a shift in the broader social paradigm, moving away from the systemic limits imposed by capitalism and towards a more liberated and empowering way of organizing human activity.

Second, prefigurative strategy involves developing alternative structures of dual power, i.e., where public resistance to oppression is combined with the simultaneous building of counter

institutions. In essence, notions of dual power recognize that a purely interstitial theory of transformation is likely not realistic for challenging existing structures of power. Thus, theorists such as Boggs (1977) advocate for the establishment of counter institutions that have the potential to generate leadership structures that are organically rooted in the local workplaces and communities (p. 104). The term 'dual power' was initially used by Vladimir Lenin (1917), who used it to describe the power dynamic between the Russian Provisional Government and the Soviets (i.e., workers' councils that formed across the country) following the February revolution, where the Soviets held significant grassroots support among workers, soldiers and peasants. However, the strategy has mainly resonated with anarchists and anti-authoritarian socialists. Many 'new anarchists' now use the dual power phrase interchangeably with that of prefigurative politics (Price, 2023). Graeber, for example, describes how the Occupy movement was influenced by the revolutionary theory of dual power, and the strategy to create liberated territories outside of the existing political and economic order (Graeber, 2013). New anarchists have therefore appropriated the 'dual power' term to refer to alternative structures and institutions that operate independently of, and often in opposition to, the existing state and capitalist systems. In contrast with hierarchical and oppressive institutions, these alternative structures embody values. Such as horizontalism, autonomy, and non-coercion. They may also, however, forge alliances and advance their demands (Asara & Kallis, 2022). Thus, this conception of dual power does not necessarily mean disengaging from existing institutions entirely, but rather, it can involve strategic participation in state processes to leverage existing resources and challenge and transform the established power dynamics from within (McKee, 2014).

In summary, while prefigurative strategies for transformation follow largely from anarchist notions of "building a new world in the shell of the old" (Flood, 2021), they borrow strategically

from other perspectives. Specifically, in addition to interstitial notions of progressively enlarging spaces of social empowerment, they incorporate 'dual power' strategies for building coalitions, establishing centralized power structures that are rooted in local communities, and engaging with existing democratic institutions.

2.3.2.3 Recent growth of prefiguration in practice

Over the last 20 years, there has been a considerable rise of prefigurative social movements (Jeffrey & Dyson, 2021; Maeckelbergh, 2016). For example, the Occupy Movement of 2011—sparked largely by disillusionment in the wake of the 2008 financial crisis—incorporated consensus-based participatory democracy that were inclusive and anti-hierarchal (Milkman et al, 2012). While Occupy was commonly misrepresented in media as lacking a coherent ideology or message, Graeber argues Occupy was "about creating new forms of organization. It is not lacking in ideology. Those new forms off organization *are* its ideology" (as cited by Raekstad & Gradin, 2020). Prefigurative practices, Graeber argues, are illustrations of what democracy could look like. For example, when protesters chant, "this is what democracy looks like," Graeber argues, it should be taken literally. "This is why all the condescending remarks about the [Occupy] movement being dominated by a bunch of dumb kids with no coherent ideology completely missed the mark" (p. 84). This prefigurative ethos at the heart of the Occupy movement was summarized by Canadian magazine *Briarpatch:*

> *In addition to bringing income inequality to the forefront of political discourse, the movement has demonstrated new ways (or ancient ways, reimagined) of organizing and taking care of one another. Through strategies such as consensus-based general assemblies, the human microphone, gift economies and volunteer committees to feed, clothe, inform and entertain one another, the movements have begun to model a sustainable, non-hierarchical alternative to the capitalist system (Briarpatch, 2012).*

More recently, in the context of the COVID-19 pandemic, prefigurative social movements have seen a further rise in popularity. As many organizations providing resources and services

closed to combat the spread of illness, government responses to alleviate hardship largely failed to address needs for many communities. A wave of mutual aid organizations therefore aimed to build communities of mutual support in a time of crisis (Rut & Davies, 2024). Rather than taking the form of traditional philanthropy, which is typically operates on a top-down model where donors decide how funds are allocated to address social problems, mutual aid is a more grassroots and community-driven approach that allows communities to identify their needs and collaborate to meet them—i.e., "solidarity, not charity" (Mould et al., 2022. p. 866). Commonly, these groups explicitly reject hierarchical structures and operate with some form of consensus-base decision-making (Gordon, 2018). Further, recent years have seen a notable increase in interest and growth of cooperatives in recent years, including an increase of more than 30% since 2019 in the United States (Jean, 2022). Although there is considerable variation in what principles cooperatives follow, they tend to adhere to adhere to normative principles including open membership and democratic member control, education and training for members, express concern for the community, and cooperation with other cooperatives (Rakopoulos, 2020). Thus, while groups like Occupy, mutual aid organizations, and cooperatives have clear differences in practices—such as Occupy's use of temporary encampments for direct action, mutual aid organization's reliance on localized, volunteer-run networks to distribute resources, and cooperatives' focus on member ownership and democratic decision-making in businesses—they all seek to address social and economic inequalities through decentralized, non-hierarchical models of decision-making, while fostering a sense of collective action and solidarity among individuals to create more equitable and sustainable systems. For this reason, these groups are associated with prefigurative strategies to establish an alternative, democratic, solidarity-based economy.

Amid growing dissatisfaction with capitalism among the general public, interest in alternative economic and political structures is rising (Monticelli, 2021). Multiple polls indicate that rejection of capitalism in Western countries has increased significantly in recent years, particularly among younger voters (Jones, 2021; Saas, 2019). Anti-capitalist narratives are also becoming more visible in mainstream discourse, with increasingly common slogans like #EatTheRich underlining the mainstreaming of anti-capitalist opinions (Creemers, 2023; Truman, 2021). At the same time, public confidence in existing institutions appears to be weakening, as seen in historically low voter turnout across multiple levels of government (Garner, 2020; DeClerg, 2022) and public trust in government nearing historic lows (Pew Research Centre, 2024). While critiques and analysis of capitalism have long existed, these trends suggest a growing demand for viable alternatives.

However, while dissatisfaction with capitalism is widespread, the question of what should replace it remains heavily contested. Decades of capitalist propaganda have equated socialism with centralized state control, leading many to conflate anti-capitalism with centralized state control (Godeanu-Kenworthy, 2020; Saed, 2021). This perception alienates those who might otherwise align with socialist principles of economic democracy and collective ownership. Yet alternative visions exist—prefigurative politics, specifically, embraces egalitarianism while rejecting state centralization. Rather than relying on state-driven strategies, prefigurative movements create cooperative and locally controlled economic structures that empower communities directly. As Alperovitz (2013) explains:

> *"What most people think of as socialism is that, with socialism, ownership of wealth and power is traditionally concentrated within the state and its national government. The vision that's emerging in these experiments around the country is anathema to that. It begins in neighborhoods and communities, in cities and states. It's about decentralizing power, changing the flow of power to localities rather than to the center."* (Alperovitz, 2013)

While some scholars and activists explicitly label prefigurative practices as "socialist" (Wright, 2021), others prefer to distance themselves from the term because of its historical associations with state control. Regardless of terminology, prefigurative politics align with values of equality and collective ownership while being skeptical of hierarchy-based methods for achieving them (Maeckelbergh, 2016). Importantly, this approach has the potential to bridge caricatures of political divides by rejecting both market fundamentalism and centralized state control (Maeckelbergh, 2016). Prefigurative politics therefore not only offer a vision for a post-capitalist future, but also make space for collaboration across ideological lines, fostering solidarity among those disillusioned with both capitalism and traditional state-driven socialism (Wolff, 2012).

2.3.3 Critiques and limitations

The central critique prefigurative politics face is that, while prefigurative practices may offer immediate benefits in a local context, they are unlikely to deliver the societal transformation practitioners advocate for. In other words, there is skepticism regarding prefigurative strategies for transformation. Wright (2010) explains this critique from a Marxist perspective:

> "While many of these efforts at building alternative institutions may embody desirable values and perhaps even prefigure emancipatory forms of social relations, they pose no serious challenge to existing relations of power and domination" … "At best they may make life a little better for some people in the world as it is; at worst they deflect energies from real political challenge to change the world to something better" (p. 231).

Critiques of prefigurative approaches – which parallel critiques of energy democracy – are often centered on (a) how over-emphasized localized practices distract from broader struggles, (b) how practices may be co-opted to reinforce, rather than challenge, the existing system, and (c) lastly, the tendency for prefigurative social movements to be commonly misunderstood and dismissed.

Concerning distraction from broader struggles, Gordon (2018) raises concerns that prefigurative practices are often overly focused on the present, which can sideline critical aspects like movement-building. By abandoning revolutionary politics in favor of local self-interest, the prefigurative approach may simply be inadequate, especially in the face of global ecological crises. The critique echoes that of anarchist movements, which never worked out an effective strategy for challenging existing power structures and were often destroyed because of their hostility to coordination and leadership. In addition to sidelining broader organizing efforts, some scholars warn that prioritizing localized concerns may leave blind spots for broader injustices. For example, the Occupy Movement experienced internal frustration that racist and sexist oppression persisted within organizing efforts, leading the Black Lives Matter movement to place leadership by black women as an organizing principle for actively reversing the power relations in the movement (Maeckelbegh, 2017). Further, cooperatives have been noted to not necessarily transcend barriers pertaining to race, gender and class – racialized women, in particular, are generally not well represented in leadership positions in cooperatives in proportion to membership in the broader population (Sengupta, 2015)

Second, a central concern for prefigurative social movements is the risk that practices are likely to be co-opted, i.e., "movements and organisations which start out trying to provide an alternative are often 'captured' by capitalism. They become part of it rather than an alternative, helping capitalism to manage people's exploitation rather than challenging it" (Django, 2010). Törnberg (2021) notes that actors experimenting with radical innovations tend to adapt according to the logic of the existing regime, often stifling its transformative potential due to a need to fit with existing rules, norms, and practices. In particular, while practices may improve local conditions, they are nonetheless bounded by the constraints of capitalist logic. For example, while cooperatives avoid

exploitation by others and can be lessons in the possibilities of self-management and participatory democracy, they are also bound by market pressures, e.g., wage-paying ability remains constrained by competition (Marcuse, 2015). Further, given engagement with state actors and funders, groups must supress more radical language, coalitions, or organizing tactics, else risk losing financial support.

Lastly, a further challenge for prefigurative social movements—not unlike the energy democracy movement—is that they are commonly misunderstood and dismissed based on those misunderstandings. Graeber (2003) notes the discrepancy between on-the-ground action and academic writing, where anarchist-inspired movements have seen dramatic rises that are not reflected in academia – "most academics seem to have only the vaguest idea what anarchism is even about; or dismiss it with the crudest stereotypes" (p. 3). Similarly, in the text *Social Sciences for an Other Politics,* a collection of essays on prefigurative politics, a central concern to the book is the resistance of academics and social scientists—including critical theorists—to learn about and interrogate prefigurative ideas (Dinerstein, 2017). Within this text, the authors argue that the clear disjuncture between theory and activism is related to scholars' lack of engagement and involvement with social movements. That is, when scholars are entirely removed from on-the-ground organizing, there tend to be blind spots regarding actual practices, thereby contributing to flawed conceptualizations of these initiatives. The limited scholarly attention prefigurative practices receive has been considered by scholars such as Gibson-Graham, who highlight how presently existing societies include more varied practices than is sometimes considered in hegemonic framings of capitalism that dominate academic investigations. These authors, like Graeber and others, encourage us to focus on the here and now as the place and time of

transformative action, rather than waiting for some distant revolution (Gibson-Graham 1996; 2006).

In summary, these critiques may point toward the importance of investigating the transformational aspects of prefigurative social movements. That is, in addition to scholarly conceptual investigations that have dominated both energy democracy and prefigurative literatures more broadly, scholars may make a more meaningful contribution by wrestling with in-practice strategies for transformation. To do so, the extensive historical lessons and literatures associated with prefigurative social movements may provide a useful lens for such considerations.

Chapter three: Methodology

The following chapter describes the methodology for the dissertation, including the strategies and approaches used to address the research question: "*Which practices are energy democracy actors enacting, and how are they extending these practices to contribute to the transformation the movement advocates for?"* The chapter describes the research paradigm underscoring the study design, a description of data and how data was obtained, and the method used in data analysis.

3.1 Research paradigm

A research paradigm refers to the worldview that shapes the way we think about reality and knowledge, and therefore how we think about research (Varpio & MacLeod, 2020). Recognizing the paradigm in which we approach research is important as the underlying assumptions guiding our decisions influence study design and expectations. For example, the paradigmatic choice is linked with different markers for rigor—while a post-positive paradigm is associated with systematic and controlled procedures to minimize error, aiming for replicable results and generalizability about a broader population (Young & Ryan, 2020), a constructivist paradigm is instead associated with depth of understanding, qualitative richness, and researcher's commitment to transparency and reflexivity (Labonte & Robertson, 1996).

This dissertation is guided by a constructivist research paradigm, which is an approach to research that posits knowledge as actively constructed by individuals based on their experiences and interpretations (Pilarska, 2021). It is associated with inductive, rather than deductive reasoning, as it emphasizes the *subjective* nature of reality, acknowledging that different perspectives and social contexts influence how people perceive and understand the world (Finlay, 2021). Labonte & Robertson (1996) describe how, in constructivist approaches, researchers select questions, engage in dialogue, help guide conversations, and draw conclusions from those same

conversations. In other words, they are part of the reality they are constructing. For this reason, rather than aiming for objectivity, replicability, and generalizability, researchers may instead aim for goals like *credibility*, ensuring trustworthiness and authenticity through context-rich descriptions; *transferability*, acknowledging that findings are context-dependent with nuanced insights that may be transferable to similar contexts; *dependability*, where decisions are thoroughly tracked throughout the data analysis; and *confirmability*, where the role of the researcher in shaping interpretations is recognized by employing reflexivity (Lincoln & Guba, 1985). The decisions guiding this study's design, from data collection to analysis, are detailed in the following sections, including specific strategies in the pursuit of these goals.

3.2 Data

To answer the research question, the study seeks insights and perspectives from energy democracy actors—i.e., on-the-ground organizations that advance energy democracy. Each of the five organizations featured in the study represent illustrative cases of energy democracy in-practice. Interviews were conducted with multiple individuals (i.e., staff and volunteers) from each of the five cases featured in the study—that is, 15 interviews across five cases. Thus, through their experiences, the study can assess energy democracy in reality. Illustrative cases refer to specific, real-world examples that exemplify particular phenomena, concepts, or principles under investigation (Yin, 2014). These serve as practical, tangible illustrations that help to clarify, enhance understanding, or provide context for the theoretical concepts being discussed, thus often offering a bridge between theory and real-life applications (Yin, 2014). Inclusion criteria for these illustrative cases, i.e., what defines energy democracy actors in this study, are as follows:

1. Organizations or initiatives that actively make use of the term ‘energy democracy’ to guide their actions and/or more broadly describe democratization and empowerment of local communities to own and control energy systems.
2. Organizations or initiatives that work to advance, in practice, local and collective ownership and control of energy (Van Veelen & van der Hurst, 2018; Stephens et al., 2018; Wahlund & Palm, 2022). This may include a variety of strategies, including direct action and advocacy.
3. Organizations or initiatives that indicate their intention to contribute to broader transformation through, for example, changing norms, building networks, advocacy, and/or linkages with social movements outside of the energy sector. In other words, organizations that publicly state social equity-related goals other than mere profit maximization.
4. Organizations located in the United States and/or Canada, where both countries share similar energy utility structures (i.e., mix of investor-owned, publicly owned and cooperative utilities) and share terminology around energy democracy, enabling a common basis for analysis in this study. Additionally, the focus on these countries was supported by data availability, with publicly available lists facilitating case identification (see below).

3.2.1 Identification of Illustrative Cases

Five illustrative cases (i.e., five organizations) were sought out for inclusion in the study, with multiple participants from each case. This strategy was used in an effort to gain a fuller picture of each organization featured in the study. To identify cases, the research drew from several publicly available lists of energy democracy actors, including Burke (2018), who identifies 53 ED actors in North Eastern America, including Canada; The Energy Democracy Project (2019), which identifies 30 ED actors in the United States; The International Energy Democracy Alliance (n.d.), which identifies 40+ ED actors; and key words searches through Google. Through these combined

sources, organizations were checked according to the inclusion criteria. 50 potential participants were identified.

To ensure the number of respondents did not greatly exceed five, potential participants were contacted in waves of 10. The first wave included potential participants with a variety of features across the inclusion criteria and jurisdictions. Subsequent waves focused on potential participants whose characteristics were so-far underrepresented in the study. For example, following the first wave, three Canadian participants and one American case joined the study. As such, the second wave focused entirely on American cases. Through this approach, five energy democracy actors agreed to participate in the study in two waves of invitations—i.e., 20 organizations were contacted to participate in the study, with five agreeing to participate. While this approach was intended to capture a range of organizational characteristics, the cases included may not be fully representative of the broader diversity of energy democracy initiatives. Two additional organizations initially agreed to participate but later withdrew due to limited capacity, raising the possibility that actors with fewer resources—often including racialized and low-income communities—were underrepresented. This is a particular concern given the study's interest in capturing perspectives across varied socio-economic and cultural contexts.

3.2.2 Data Collection Method

The primary data collection method involves semi-structured interviews with participants from each illustrative case. Interviews were conducted with multiple individuals from each of the five cases featured in the study, resulting in 15 total interviews conducted across all cases. Individuals within each case were sought out with considerable knowledge of the organization's mission, goals, and actions, e.g., executive directors, board chairs, and program managers. While including project users (i.e., community members directly involved in or impacted by the initiatives) could

have provided valuable insights into lived experiences, this was not pursued due to anticipated organizational hesitancy to involve vulnerable community members, the logistical complexity of recruiting across sites, and the associated expansion of scope. This remains a valuable avenue for future research. Several organizations in the study did not follow a conventional hierarchical structure—for example, some co-operatives and volunteer-based organizations operated with more distributed or informal decision-making processes. In these cases, members with relevant knowledge and expertise were suggested by the organization and were contacted to participate.

Interviews were conducted through two video conferencing software, Zoom and Microsoft Teams, with interviews lasting between 45 and 60 minutes each. Interviews were semi-structured and were guided by the theoretical framework (see Appendix B for the interview script). Interview questions investigated how energy democracy actors describe their role along the two components of prefigurative politics: the *enactment* and *extension of* alternative practices.

Lastly, in an effort to enhance *transferability* of this study (Lincoln & Guba, 1985), data was collected to capture the contextual nuances surrounding each case. Supplementary data was obtained from government websites pertaining to state/provincial energy profiles, policy contexts, and socioeconomic and political factors. Providing additional data that enhances the richness of the case descriptions is argued to enable the study to provide potential insights to contexts with similar factors. This supplementary material was not coded as part of the thematic analysis; rather, it is presented separately in Section 4.1 (Overview of Cases) to provide contextual background for interpreting the results.

3.3 Data analysis

The data analysis approach involves two key components: (1) the theoretical framework that will guide the analysis, and (2) the method for analyzing data. The following section outlines these components, summarizing how their integration will inform the study results.

3.3.1 Theoretical framework

Drawing from Section 2.3, the theoretical framework guiding the analysis is prefigurative social movements—specifically, the theory of change underscoring this type of social movement, involving the *enactment* of alternative practices and the *extension* of alternative practices (Boggs, 1977; Wright, 2011). The study explores the motivations, successes and limitations that energy democracy actors experience along the components of a prefiguration framework: (1) whether/how energy democracy actors are *enacting* alternative practices (i.e., how they describe using alternative practices and how they structure themselves in their local community); and (2) whether/how energy democracy actors are *extending* alternative practices (i.e., how they describe advancing these practices in an effort to foster broader systemic change). Through this framework, the research provides an empirical investigation to assess how the on-the-ground reality of ED compares with the movement's more theoretical ambitions, i.e., how the theory of change guiding prefigurative social movements correlates with ED in reality.

3.3.2 Method for data analysis and presentation of results

Along the overarching theoretical framework, interview transcripts are qualitatively coded using a thematic analysis, which is an analysis method for systematically identifying, organizing, and offering insight into patterns of meaning, i.e., themes, across a dataset (Braun & Clarke, 2012). By distilling complex narratives and perspectives into themes, thematic analysis is a useful approach for understanding explicit and implicit meanings from data (Finlay, 2021). In research

involving cases, such as this study, thematic analysis is a widely used approach due to its power to yield insightful interpretations that are contextually grounded (Lapadat, 2010).

The data analysis method used in this dissertation draws heavily from Braun & Clarke's (2006; 2012; 2022) seminal work on thematic analysis (TA). While emphasizing that there is no one way to do thematic analysis, these authors provide useful guidelines, including six phases, which are described in Table 1. Importantly, to ensure *confirmability*, these phases involve a reflective and non-linear process, where each phase is approached iteratively. These authors describe, "you're moving along a trajectory from dataset to analysis, but that often involves going sideways, backwards, and sometimes even around in circles, as you move from the start to the end of the process. Knowing that is important, because it's not only part of the process, it's part of doing TA well" (Braun & Clarke, 2022, p. 36). Lastly, to ensure *dependability,* a key component of the analysis involves rigorous documentation of all steps taken along the six phases. To this end, Table 1 describes specific steps taken in the dissertation. Of note, the presentation of results is in line with Braun and Clarke's (2006; 2012; 2022) approach to thematic analysis. The results are presented as an analytical narrative that weaves together key themes with illustrative quotes from the data, rather than providing the raw interview data in its entirety. This approach prioritizes interpreting and synthesizing the data to convey key patterns and themes, rather than presenting raw, unanalyzed interview transcripts.

Table 1. Phases of thematic analysis

Phase	**Description of phases (Braun & Clarke, 2006; 2012; 2022)**	**Specific steps taken in the dissertation**
1.Familiarize yourself with the data	Read and re-read the data, immersing yourself to become intimately familiar with it. In this phase you may write some notes, or preliminary codes, to highlight what initially stands out as important.	As interviews were being conducted, all transcripts were printed in hard copy so the first phase could be completed by hand. Transcripts were read and re-read while listening to interview recordings. Notes were taken on paper, highlighting interesting and relevant ideas, and mind maps were created for each illustrative case.

2. Generating initial codes	Begin to systematically analyze the data, finding segments that are relevant, interesting, and meaningful. These segments are denoted with descriptions or statements, i.e., codes.	NVivo, a qualitative data analysis software, was used in this phase of the analysis. Initial coding was completed, with segments documented and clustered into preliminary groups.
3. Searching for themes	Identify shared meaning across the dataset through clusters of codes and shared ideas. This phase informs how we bring codes together to have more explanatory power and be more abstract, i.e., broader meaning	Initial codes were printed from NVivo and clustered into groups by hand, allowing for a visual consideration of themes and more refined consideration of groupings.
4. Develop and revise themes	Begin an iterative process to ensure the themes make sense in the dataset. At this phase, themes may be identified that overlap or fail to cover critical ideas.	Based on identified themes and subthemes, interview data was re-coded in NVivo. This phase involved reflection and revision of phase three.
5. Defining and naming themes	Ensure that each theme is built around a strong core concept. Themes should reveal something about the data and somehow inform the research question	Following revisions, a finalized version of the emergent thematic framework was established (see Table 3 in Chapter 4).
6. Producing the report	Weave together the analytical narrative.	Across all themes and subthemes, interview data was weaved together to form the narrative of the thematic analysis.

3.4 Summary

In summary, the study design for the dissertation involves five illustrative cases of energy democracy actors, where data involves multiple interviews from each case, with supplementary data from publicly available websites. Interview data is analysed across the theoretical framework using a thematic analysis. Given challenges associated with case-based studies for ensuring generalizability, including in thematic analysis (Glette & Wiig, 2022), steps are taken to reach more constructivist-oriented goals, including credibility, transferability, dependability, and confirmability.

The methodological approach outlined above enables a detailed exploration of how the theoretical ambitions of energy democracy are realized—or challenged—in practice. That is, the study provides insights and context-rich descriptions to address the research question and illuminate how energy democracy actors are contributing to the transformation the movement advocates for. The following chapter presents the results of this analysis, organized around the key

themes that emerged from the interviews, and considers how these themes reflect, diverge from, or complicate the prefigurative framework introduced earlier. In doing so, the analysis serves as a bridge between the conceptual ideals of energy democracy and the lived realities of its enactment on the ground.

Chapter four: Results

The following chapter presents the results of the dissertation study. Section 4.1 provides supplementary data collected about each energy democracy case and its location. Section 4.2 presents the results of the thematic analysis, including an overview of the emergent themes, and summaries across these themes.

4.1 Five Energy Democracy Cases

This section provides summaries of the five illustrative cases included in the study. As was explained in the methodology, supplementary data was collected to capture the contextual nuances surrounding each case to enhance transferability of this study, i.e., acknowledging that findings are context-dependent and nuanced insights may only be transferable to similar contexts (Lincoln & Guba, 1985). Key details about each organization were identified from publicly available sources, including organizational websites, social media and news articles. Further, data pertaining to each location was obtained from government websites and literature pertaining to state/provincial energy profiles, policy contexts, and socioeconomic and political factors. While all five cases advance energy democracy, the summaries demonstrate a diverse collection of cases, including varied practices, motivations, and unique contextual factors.

Table 2. Illustrative Cases Overview

Name	Location	Organizational Structure	*Organizational Mission/Aim

Antigonish Community Energy Cooperative	Antigonish, Nova Scotia, Canada	Volunteer-run, not-for-profit, co-operative	"To empower residents and businesses to confidently invest in clean, renewable energy at an affordable and competitive price; work within the community to address how we obtain energy, and plan for sustainable energy production to address our changing needs; contribute directly to the relief of poverty in our community which is due, in part, to the high cost of energy; and encourage energy efficiency, social justice, and environmental protection." (ACE, n.d.)
Bow Valley Green Energy Cooperative	Bow Valley, Alberta, Canada	Volunteer-driven, member owned, for-profit cooperative	"To empower our community to reduce its environmental impact by Pooling human and financial resources to foster the development of Renewable Energy projects and to lead our community on the transition to a more sustainable future" (Bow Valley Green Energy Cooperative, n.d.)
Cooperative Energy Futures	Minneapolis, Minnesota, United States	Member-owned for-profit cooperative	"To empower communities across Minnesota to build energy democracy through solutions that are clean, local, and ours" (Cooperative Energy Futurs, n.d.)
New Energy Economy	Santa Fe, New Mexico, United States	Not-for-profit	"To resist fossil-fuel and nuclear energy extraction", and "expose the vision of what's possible by creating community-based energy solutions" (New Energy Economy, n.d.)
WE Power DC	Washington DC, United States	Volunteer-run, decentralized working group	"We Power DC is fighting for a power system that works for and is owned by the residents of the District of Columbia–one that works transparently and democratically to fight the climate crisis and meet everyone's needs regardless of their ability to pay" (Metro DC Democratic Socialists of America, 2024).

*Organizational mission/aim statements were taken from each organizations' public website.

C1. Antigonish Community Energy Cooperative

Organizational Overview

The Antigonish Community Energy Cooperative (ACE) was a volunteer-run not-for-profit organization, which operated from 2015 to 2020. ACE was established following several Community Energy Forums, which were volunteer-based initiatives that brough together local community members to develop a community-based sustainability plan. Based on feedback from these forums, ACE was formed with the goal to facilitate the installation of one megawatt of local

photovoltaic electrical generation, spread over approximately 100 homes, businesses, and organizations (ACE, n.d.). To that end, ACE volunteers organized bulk purchases of solar panels for local residents, businesses, and community organizations. "By organizing group-buys and putting solar systems on as many homes as possible, we hope to trigger a snowball effect to kick-start the local green energy transition" (ACE, 2016). ACE collaborated with local small-scale businesses, who provided free assessments to members and helped to negotiate bulk pricing discounts. In addition, a key component of ACE included an innovative approach for addressing energy poverty in the community. Costs that members paid for the purchase of solar panels included a 'tax' that went toward solar panels to be installed on the rooftop of someone who is facing poverty or on the rooftop of an organization that is directly involved in poverty relief in the community.

ACE closed their doors in 2020 due to a variety of internal challenges, including volunteer burn-out and circumstantial changes for volunteers; as well as external factors, including increased action at the municipal level, where the local government had increased its involvement in the local renewable energy space, therefore indicating less need for them to fill the gap. Over just five years of operation, however, ACE contributed over $1,000,000 worth of hardware and $300,000 to the local economy. Further, through their energy poverty initiative, they raised $40,000 to install solar energy on low-income housing.

Location Overview

ACE was located in Antigonish, Nova Scotia, Canada, which—as was emphasized by study participants—played an important role in the vision and achievements of ACE. Antigonish carries a unique legacy of "The Antigonish Movement," a grassroots social movement involving co-operative development, education, and mutual aid. As documented by Dodaro & Pluta (2012),

the movement achieved great local success during the 1930s, after emerging from a period of prolonged stagnation, decline, and outmigration. It involved experimenting with practices that promoted socio-economic change, including community-based credit unions, cooperative stores and services, and local societies. The Antigonish Movement promoted social and economic reform through the establishment of a unique alternative economic system based on cooperation and education. This system enabled people to develop and control economic institutions and resources, thereby advancing both political and economic democracy, and a socio-economic order centered on community-based ownership and control of institutions across all sectors. The legacy of Antigonish's unique political history remains relevant and a point of pride within the community.

Nova Scotia's residents (as well as other provinces in Atlantic Canada) are documented to experience much higher levels of energy poverty compared with national averages (Efficiency Canada, 2024). Forty three percent of Nova Scotians are considered "energy poor," meaning that they spend more than 6% of their after-tax income on heat and light in their homes (Henderson, 2024). Most Nova Scotians fall under the provincial monopoly utility Nova Scotia Power (NSP), which is owned by Emera, a privately owned multinational corporation. While NSP has pursued large scale low carbon energy projects, including hydroelectricity from Labrador through the Maritime Link, it has fallen behind renewable energy targets set by the province (Henderson, 2023). Further, NSP has faced criticism for proposing power rate increases to enable them to transition from coal to low carbon sources, all while Emera is experiencing record profits (Henderson, 2022). Notably, however, Antigonish is one of six communities in Nova Scotia who opted for a municipally owned and operated electric utility, rather than relying on Nova Scotia Power. The utility serves 3,000 residential customers and over 500 commercial customers.

C2. Bow Valley Green Energy Cooperative

Organizational Overview

The Bow Valley Green Energy Cooperative (BVGEC) is a volunteer-driven and member-owned cooperative located in Bow Valley, Alberta, Canada. BVGEC was established in 2019 when a local charity, the Biosphere Institute, envisioned a "network of solar panels across our valley" and undertook a feasibility study for a suitable community-owned solar project and community-based financing mechanisms (Biosphere Institute, n.d.). From this process, a small steering committee was formed that subsequently became the founding board of directors. BVGEC are classified as an "opportunity development cooperative"—terminology unique to Alberta, which refers to a for profit enterprise that is owned collectively by members, generates financial returns for those members, and supports local economic development. They are now guided by a board of up to twelve volunteer directors who members elect at annual meetings. They leverage member investment to install renewable energy projects, including solar, geothermal, hydro and wind. All community-owned generation projects are controlled by members who invest in the project installation, sell the electricity to the grid or host site, and share the profits. Notably, BVGEC has made concerted effort to structure their organization so that they are not dependent on government subsidies. This includes connections to Rocky Mountain Community Energy, a licensed marketer of energy, internet, and wireless services—"When you supply your home's gas or electricity needs through Rocky Mountain Community Energy, you directly support Bow Valley Green Energy Coop to complete green initiatives that benefit our community" (Bow Valley Green Energy Cooperative, n.d.)

Location Overview

The Bow Valley Green Energy Cooperative (BVGEC) is located in the Bow Valley, Alberta, an area that includes communities such as Banff and Canmore. Alberta is widely viewed as a conservative province with a long history of right-wing politics—unique in the Canadian context, centre-right parties have dominated Alberta's political landscape since the 1930s (Taras, 2020). Harrison (2015) explains this long-running tendency by noting that Alberta was settled primarily by arrivals from the United States who emphasized individualist values, and the province's early reliance on ranching, rather than farming, further accentuated competitiveness and individualism. Potentially furthering this trend, Alberta's current political and economic landscape reflects its dependence on oil, and is accompanied by a deeply rooted distrust that the federal government has Albertan's best interest in mind when they involve themselves in the control of Alberta's natural resources (Fraser Institute, 2021). The province of Alberta is the largest producer of crude oil in Canada, accounting for 80% of total Canadian production as of 2020, which has made Canada one of the world's top five oil producers (USEIA, 2014). Over 21% of Alberta's annual GDP comes from the oil and gas sector, as well as 6% of provincial employment—a number that expands considerably when indirect jobs are included (Environment and Climate Change Canada, 2023). Many Albertan oil workers earn enough to be safely placed within the top 1% of income earners in Canada (Harrison, 2015). Within the Albertan context, however, the Bow Valley has maintained more progressive values—specifically in relation to sustainability—and has leaned towards more progressive political representation at provincial and federal levels. With proximity to national parks and a local economy driven by tourism, the Bow Valley stands out within Alberta's broader political culture.

Unlike other Canadian provinces, Alberta's government has never owned and operated a utility company, opting instead for a deregulated market structure. In the Bow Valley, local electricity distribution is primarily managed by FortisAlberta, but there are also other providers such as ENMAX Power Corporation and EPCOR Distribution & Transmission Inc., depending on the specific area within the Bow Valley. Residents and businesses in these areas can choose their electricity retailers from a competitive market. Despite this flexibility, Alberta faces an uncertain policy landscape for renewable energy development. In August 2023, for example, the Alberta government announced it was pausing all new approvals of renewable energy (wind and solar) projects for six months while its utilities commission investigated factors such as impacts on "pristine landscapes" (Styczen et al., 2024). While the pause has expired, the province implemented new rules and restrictions specifically for renewable energy projects, and the majority of provincial renewable energy and energy efficiency incentives have been cancelled (Stephenson, 2019).

C3. Cooperative Energy Futures (CEF)

Organizational Overview

Cooperative Energy Futures (CEF) is a renewable energy cooperative that started in 2009. It was formed by a group of college students who were frustrated with the inequality they saw in their communities and were interested in the idea that energy efficiency and renewable energy could build wealth for local people. The students worked with community members to expand their approach regionally and formed CEF as a 308B cooperative with a 6-member founding board. They are now a for-profit enterprise but instead of having centralized ownership or shareholders, their members share profits and make decisions democratically (Soren, 2020). "In a time where our country is facing both environmental and economic crises, Cooperative Energy Futures (CEF) envisions a future where people own, manage, and use clean energy systems for all of our

collective benefit" (Cooperative Energy Futures, n.d.). CEF now embarks on initiatives such as a residential bulk-buying models to make energy efficiency and renewable energy solutions more accessible and affordable for community members. This approach involves organizing group purchases of home efficiency products and coordinating group contracting for services like insulation and air sealing. By aggregating demand, CEF secures discounted rates from contractors and suppliers, reducing costs for participants. Operating with a democratic cooperative model of one member = one vote, CEF maintains accessible membership with a one-time $25 membership share.

CEF emphasizes a particular focus on ensuring that benefits are available to and can be owned by low income and people of color communities. Members subscribe to community solar gardens that are cooperatively owned, paying nothing up front and immediately receiving a discount on their utility bill. Notably, some projects enable households to offset their whole electric bill. Timothy Denherder, general manager of CEF, explains, "this is about changing the economics and changing the politics of who has control over decisions" … "we can create the energy infrastructure we want to see" (as cited in Secular North, 2019).

Location Overview

CEF is located in Minneapolis, Minnesota, United States. Minnesota has a noted history of progressive and a politically active citizenry. Since 1976, voters have consistently voted for Democratic presidential candidates, and social democratic candidates have gained prominence in recent years, e.g., Ilhan Omar, the representative of the Minneapolis area and a member of the progressive "Squad". Populism also has a long history in the state—extending back to the Farmers Alliance movement in the 19th century which challenged railroad barons and milling tycoons (Backerud, 2014). Despite these progressive political movements, dramatic racial income

inequality persists in Minnesota, with median incomes of $87,692 for white households, $45,289 for Indigenous households, and $49,738 for Black households (MN Employment and Economic Development, 2024). Minneapolis was also the starting point of the global Black Lives Matter movement against police brutality and racial inequality following the police killing of George Floyd in Minneapolis in May 2020).

In Minneapolis, Minnesota, the electric utility market is dominated by Xcel Energy, which operates as a regulated monopoly. This means that Xcel Energy is the sole provider of electricity within the service area, and customers do not have alternative providers to choose from. Xcel has made efforts toward decarbonization, e.g., they have stated an ambitious commitment to be carbon free by 2050 (Roberts, 2019). Like many other utilities, however, they have also proposed rate increases to accommodate costs associated with the transition and have also recouped costs for gas prices from consumers—increases that have led to consumer frustration given Xcel's increased profits in recent years (Brasch et al., 2022).

C4. New Energy Economy (NEE)

Organizational Overview

New Energy Economy (NEE) is a registered 501(c)(3) non-profit organization founded in 2004 and located in Santa Fe, New Mexico, United States. NEE's aim is to "radically transform our energy systems – the basis of our economy" (NEE, n.d.). To accomplish this goal, NEE's model involves two overarching strategies: first, they aim to disrupt the current energy model by resisting "false solutions," which they define as "technological or market based schemes promoted by fossil fuel companies and their political allies to give the appearance of meaningful climate action while actually functioning to delay effective policies that might challenge their power, control and/or profits" (New Energy Economy, n.d.). NEE's efforts to combat false solutions have largely

involved litigation and advocacy. For example, NEE successfully led opposition to resist the acquisition Public Service Company of New Mexico (PNM) by Avangrid, whose parent company is the Spanish energy giant Iberdrola. Following a court decision to deny the merger in December 2021, Avangrid eventually withdrew its appeal of the decision and decided to no longer pursue the merger (Walton, 2024) – a huge win for NEE and their community partners. NEE's second strategy is to demonstrate what is possible by advancing community-based energy alternatives. This includes campaigns such as *Sol for All*, where NEE partners with local communities to develop community owned renewable energy projects; and *Local Choice Energy*, where they advocate for local communities having the legislative ability to create non-profit locally owned utilities, thereby challenging the current monopoly structure in New Mexico.

Location Overview

New Mexico has the highest income inequality in the United States, with the average income of the top 20% of households being 9.9 times the average income of the bottom 20% (Center on Budget and Policy Priorities, n.d.). Extreme heat has also been a significant issue for the southern state, with more than 900 heat-related hospital visits in the summer months of 2023 (AP News, 2024). Such challenges are not unrelated – for example, research in the area has shown that leafy neighbourhoods with trees and shade that keep the air cooler are less likely to be available in poorer neighbourhoods (James, 2021). New Mexico also has a long history of environmental racism, including the nuclear legacy dating back to the Manhattan Project, where Hispanic and Indigenous populations were forced to relocate. This legacy has continued with ongoing nuclear waste sites that predominately disadvantage the same communities (Peña-Parr, 2020). In this context, the state has seen the emergence of social movements, particularly Indigenous-led movements, that are

fighting to preserve and restore food and water systems, and resist colonization and environmental racism (Devault, 2022).

The energy sector in New Mexico is dominated by investor-owned monopoly utilities, namely Public Service Company of New Mexico (PNM) and El Paso Electric (EPE). PNM and EPE are investor-owned monopoly utilities, meaning that most New Mexico residents have no choice but to obtain power from them. Although PNM is a goal to provide carbon free electricity by 2040 (Center for the New Energy Economy, 2021), PNM and EPE's electricity portfolio is currently dominated by coal, natural proportion gas, and nuclear, but is shifting to include more renewable sources (DNV, n.d.). PNM is seeking to shift the costs of transitioning to renewable energy onto consumers by proposing higher utility rates and surcharges, rather than absorbing these expenses themselves (Grover, 2024) and is actively opposing efforts to open the market to competition (New Energy Economy, 2022). Despite these challenges, New Mexico has an abundance of solar potential, ranked second in the United States for potential solar-generated electric power production (The New Mexico State Land Office, n.d.).

C5. We Power DC

Organizational Overview

We Power DC, founded in 2020, is a coalition of community members located in Washington, DC, United States. They started as a local bottom-up campaign encouraging council members to take the No Pepco Pledge—a pledge aiming to counter regulatory capture of energy-related decisions by stopping council members from taking money from the city's private utility, Pepco. They now organize to combat specific actions by Pepco, such as a proposed 20% rate increase over three years, while also advocating for legislation that protects households from utility shutoffs due to non-payment, the recognition of access to utilities as a human right, and the resistance of

fossil fuel in the district (We Power DC, n.d.). We Power DC also to advocates for public power, i.e., public ownership and control over the city's energy system. "Corporate utilities are guaranteed to profit, regardless of the quality of service they provide" ... "We can control our energy system by kicking the investor-owned Pepco out of DC! Public utilities answer to us – DC residents who depend on reliable, affordable energy" (Action Network, n.d.)

We Power DC operates with a democratic organizational structure that incorporates 'sociocracy'—a theory of governance that draws on the use of consent, rather than majority voting, wherein decisions are reached when there are no objections from members. They incorporate small groups called circles with defined roles, e.g., a mission circle with an eye on long term strategy, a political education circle, and a communications circle. The development of their organizational model has been iterative and experimental, evolving as the group expands their practices. For example, they started an environmental justice policy circle where they coordinate with justice groups and make connections with council members. While initially starting as a local bottom-up campaign, We Power DC now falls under the umbrella of the local Metro DC chapter of the Democratic Socialists of America (DSA), an organization working toward democratic socialism with over 94,000 members nationally. DSA working groups, such as We Power DC, organize around specific campaigns including tenant organizing, defunding the police, supporting and organizing unions, engaging in electoral campaigns, and helping realize the Green New Deal (Metro DC Democratic Socialists of America, n.d.). While you do not need to be a member of DSA to join, We Power DC are now institutionally a part of that broader organization.

Location Overview

Washington, DC, has a unique political structure. Established by the US Constitution to serve as the nation's capital, it operates under the exclusive control of the federal government and lacks

representation in Congress. D.C. also has notably high levels of inequality between white and black residents—as of 2019, the median household income for white residents was $149,734, while the median income of Black residents was $49,652 (Council Office of Racial Equity, 2021). D.C. has also been the United States most gentrified city—the city's Black population has dropped from 61% to less than 45%, with the highest rates of displacement in the country (Erickson, 2022). The arrival of white professionals has been argued to involve a "concerted effort by city officials and developers to attempt to solve community problems like crime and drugs by forcing out working-class Black residents and making room for wealthier, white newcomers" (Overly et al., 2022). In this context, however, there is a wave of grassroots politics that includes "progressive multi-racial coalitions" where some newcomers can become allies (Overly et al., 2022). For example, the push for D.C. statehood aims to address how residents are denied the full rights of citizenship such as voting representation in congress. This effort is seen as a component of struggles to address racial inequality in D.C—while Black activists have long pushed for statehood, the movement is increasingly multiracial (DC Statehood, 2022).

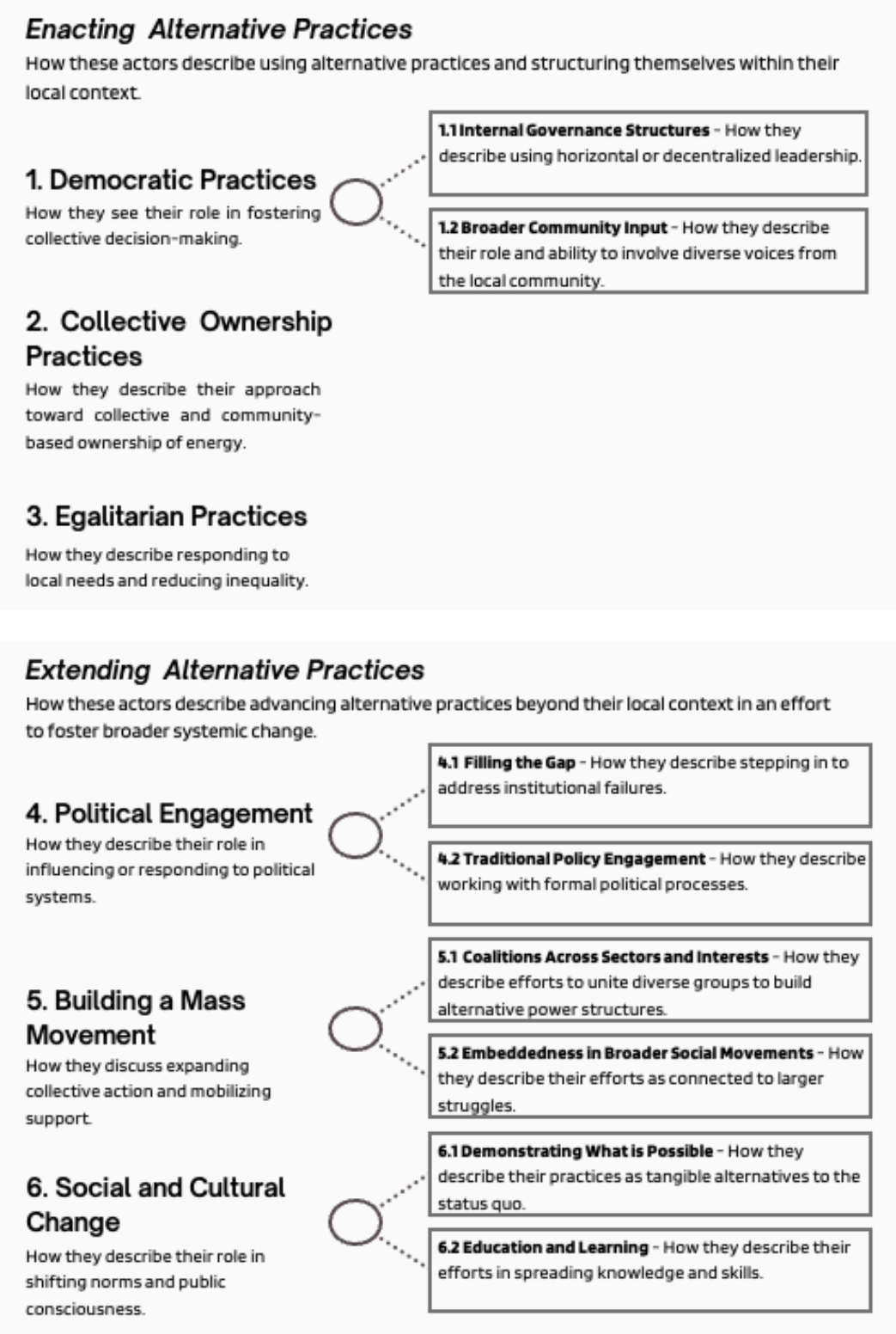
The City of Washington, DC, is supplied with electric power by Pepco, a utility company owned by Exelon, the largest electric parent company in the United States. Notably, Pepco has a lengthy history of controversies. In 2011, for example, they were named first on a list of the most hated companies in America (Lubin & Giang, 2011), which was related to growing awareness that Pepco had 70% more outages than other big-city utilities (Stephens & Flaherty, 2010).

4.2 Thematic Analysis

The following sections provide the thematic analysis. Figure 1 presents the themes that emerged from the data. As was explained in the dissertation's methodology, the two overarching categories of ***enacting*** **alternative practices** and ***extending*** **alternative practices** were derived from the

literature review (sections 2.3.2.1 and 2.3.2.2) and these categories guided the interview questions (see p. 109). All themes and subthemes emerged through the thematic analysis steps described in Table 1 of the methodology. The following sections present the thematic analysis, including the emergent themes and subthemes, which are outlined in Figure 1.

Figure 1. Emergent framework



4.2.1 Enacting Alternative Practices

The following section presents the thematic analysis, which, as was explored in the methodology, is an analysis method for systematically identifying, organizing, and offering insight into patterns of meaning, i.e., themes, across a dataset (Braun & Clarke, 2012). The emergent themes are described below, with high level summaries at the beginning of each theme description.

4.2.1.1 Theme 1 – Democratic Practices

Summary

Participants across all groups described creative, experimental, and meaningful democratic practices, where organizational and community members gained agency over decisions that impact them. While challenges associated with internal governance structures (e.g., opposing perspectives among members) could be overcome through dialogue and a sense of shared purpose, challenges associated with broader community input (e.g., limited time and capacity to participate) were harder to overcome. Participants expressed a notable awareness of these limitations, often seeing their role as community champions and truth-tellers, rather than envisioning communities consistently being involved with day-to-day energy decisions.

In the theme of "democratic practices," participants discussed both (1.1) *internal governance structures* (i.e., how organizations make decisions) and (1.2) *broader community input* (i.e., how the broader local community may be involved in decisions).

Concerning *internal governance structures*, most participants described democratic, horizontal and inclusive decision-making practices. For some, democratic decision-making was the driving force and a motivating factor for their organization. Multiple participants from C5, for example, discussed their internal structure in prefigurative terms, expressing that it was a way to "practice the ultimate goal we're trying to deliver." Another participant explained, "we're advocating for democratic ownership … we want the means in which we organize … to really embody those values." For other groups, democratic practices were not so explicitly associated with their aim, but they nonetheless were practiced and valued by members. One participant from C2, for example, described how "this whole linkage to democracy is new for me … and I find that

pretty interesting, particularly using this as a vehicle for driving democratic discussions and democracy elsewhere in our society." Several participants described a tangible example of democratic practices that contrast with how traditional utilities operate, i.e., in the context of rate increases. A participant from C1, for example, described how when their volunteer board felt there was a need to implement an additional fee to cover internal administrative costs, they brought that recommendation to be decided on by all co-op members, who were entirely supportive of the decision. Further, participants also described how they valued their democratic practices were valued from a personal perspective. A participant from C2 explained that:

> "You have a say in a space where you might not have had a say before … Like especially for me … I'm the youngest person on the board. I'm also a woman and you can imagine in my work I end up in a lot of spaces where you can tell … being a woman is looked down upon. And it's not in this space."

At the same time, however, participants described friction that could emerge within their organization. Participants from both C2 and C5 described occasional differences among members of their organization that brought contesting perspectives and priorities, e.g., between business-minded members and environmentalists, and between energy experts and socialist organizers, respectively. C2 described how, from more socially minded environmentalists:

> "There was some mistrust of the big business folks, thinking that this is all going to be to sort of drive the profit motive. And there was some perceptions amongst the big business folks that 'the greenies' didn't know how to run a business. And both was a little bit true, but you know, through dialog … we had weekly meetings where you got to understand a little bit of the background of where people were coming from and what they truly believed in, and that mistrust has been eliminated a long time ago."

Similarly, C5 described how their internal structure developed overtime, often through experimentation, to build a culture of trust. One participant described how:

> "Since I've joined, we've had a lot more formalization of procedure … with the idea that more clarity will lead to empowerment and less tension. … I think that's functioned well because there's just a positive spirit of goodwill and trust. And I think

a lot of people have named that when they're newer, that they've been grateful for that culture."

Concerning *broader community input*, all groups extensively discussed the importance of community and grassroots involvement in driving their overall mission and key activities, repeatedly emphasizing that long-term change must stem from the community. A participant from C1, for example, explained how community engagement is often the missing piece to how we design policies; "that's where the solutions lie … that's the only solution." Despite this emphasis, participants from all groups also emphasized the immense barriers that impede community involvement. People have "poverty of time," one participant from C1 described. A participant from C3 explained, "people have all these structural issues going against them … working multiple jobs … transportation is substandard … child care is not great … there's so many things that discourage people from participating in things like this that matter." When asked about community involvement, a participant from C4 explained:

> "So, I'm going to answer that honestly … one of the privileges is that I'm white and I have a law degree … I have an understanding that is constantly growing of what shenanigans and games and fucked upness that utilities are playing, and most people don't know that. Even educated people don't know that." They went on to describe how "the legacy of racism and pollution and contamination and oppression" can lead people toward apathy and disengagement. "Sometimes they rise up saying I have nothing left to lose, and other times they say we have no chance so forget it … I'll keep my head down. Forget it."

Given these challenges, rather than presenting a potentially utopian picture of all people contributing to all decisions, most participants saw their role as "community champions," "advocates," and "truth tellers." Overall, while participants emphasized the importance of community involvement, they also expressed a realism of limitations based on their experience.

4.2.1.2 Theme 2 – Collective Ownership Practices

Summary

Participants across all groups saw the ownership structures they advanced in contrast with conventional ownership arrangements in the energy sector. While conventional practices (i.e., primarily investor-owned utilities) were seen to be motivated by profit, therefore incentivizing harmful social and environmental outcomes, the alternative and collective practices advanced by participants enabled them to advance community interests over profit. Differences emerged among the study cases, however, related to the type of collective ownership, i.e., public ownership (i.e., energy assets being owned and managed by government entities) and community ownership (i.e., ownership and control by local communities, often through cooperatives or non-profit organizations). Participants were at times wrestling with these differences, and considering what ownership structures may be the best fit for their community.

In the theme of "Alternative and collective ownership practices," participants across all groups described their critique of existing ownership arrangements and presented their alternative and collective ownership practices in contrast with these arrangements. Participants, in particular, frequently criticized investor-owned monopoly utilities. A participant from C3 highlighted the wealth extraction by utilities, stating, "The way it currently is, is there is a monopoly that is mainly by big investors" … "as far as the share of who owns what and who gets the profit, it's mainly big investors that are getting paid." Similarly, in consideration of this problem, a C4 participant questioned:

> "Why should a huge corporation be making money over something that is owned constitutionally by the people of the state? Natural resources are owned by the people ... Why would we want some corporation to have their stockholders get wealthy on something that we own? … It's the Commons." They further emphasized that "this system incentivizes the utilities to make the worst possible choices that they can … their shareholders make the most money from that."

Participants repeatedly provided concrete examples of the harm caused by investor-owned utilities, including undermining democracy, utility shutoffs, rate increases alongside record profits, and resistance to renewable energy transitions.

In contrast conventional ownership arrangements, the alternative and collective ownership practices advanced by participants' organizations were discussed as strategy to challenge injustices in the energy sector—specifically, alternative ownership practices encourage social and environmental objectives rather than solely being motivated by profit. C2 explained how their cooperative ownership structure allows them to operate as a "semi-benevolent" organization, enabling them to function both as a for-profit business and a social enterprise. C3 similarly argued that their structure "allows us to serve people differently … It's not just for us to make a bunch of money." Alternative ownership arrangements were also seen to enhance governance functions, such as accountability. Given their embeddedness within the communities they served, they commonly felt well positioned to understand community needs and be accountable to their neighbours. A participant from C1 described, "You walk into the grocery store, you're going to run into members on the way. So I feel there is a feeling, an expression, of that community mindedness." Similarly, a participant from C4 explained, "I wouldn't want to go into the grocery store and have someone go, 'Hey, I had no electricity for a week. What the hell are you doing?'… I am directly accountable instead of it being so far away in this capitalist craziness."

Despite these commonalities, there was wide variety across participants on how alternative and collective ownership structures may be designed, e.g., bulk-buying strategies that encourage household ownership, and various cooperative and public power arrangements that include distinct forms of collective ownership. For C1, reaching beyond bulk-buying strategies to more collective ownership was hindered by capacity limitations of their volunteers. "The original idea was to have … something that would be community based, where even if you lived in an apartment, you could buy one panel on an array and then you would have that benefit." Notably in their case, following their closure, the municipality decided to move forward with a similar idea for a solar garden, but

the project has faced local opposition. This contestation points to the reality that public ownership does not always adequately incorporate community control. C5, on the other hand, who specifically advocate for municipal ownership, discussed how are they are reflecting on this risk through internal working groups and discussions:

> "I don't think there is a one size fits all solution for every place and I think the municipal structure might work for DC … but there are a lot of places across the country that have cooperative power and it makes more sense [for them]." Nonetheless, they argued that collective ownership "in whatever form we can get it would still be better than this investor-owned utility … because it's based on a profit incentive and not on service provision … [that is] not going to serve people well."

4.2.1.3 Theme 3 – Egalitarian Practices

Summary

Participants across all study cases cited local social benefits as a central motivation for their work, including issues like local economic growth and addressing historical inequality. All cases described key practices that addressed inequity, including innovative practices aimed at addressing inequities unique to their locality. At the same time, several participants also admitted areas in which they were falling behind, e.g., challenges bringing in groups that experience harm.

In the theme of "Egalitarian practices," participants across all groups stressed that social concerns were integral to their organization's raison d'etre. That is, participants commonly talked about how the ability to address social concerns was present and at the forefront as organizations began. A participant from C1 described, "It was not an act as an afterthought. It was all embedded in the very DNA of the organization." Recognizing the inaccessibility of solar panel installations for many residents, and the need to address energy poverty in their community, C1 implemented a 'tax' on solar panel installations as a "means of transferring wealth" to those in need, raising $40,000 to install solar energy on low-income housing. Other initiatives include C2 offering lower fee structures for sites "without deep pockets" and an aim to contribute to a community initiatives fund in the long term; C3 focusing their solar gardens on accessibility for renters, low to mid

income subscribers and historically disadvantaged populations to reduce utility bills of those who need it most; C4 implementing solar installations for residents who were formerly unhoused and dealing with mental health challenges, creating a dignified living space; and C5 being actively involved in fights for shut off bans, which protect low-income communities when they have been unable to pay utility bills. As C3 noted, "People want to hear that … I think it helps a lot having that social mission in that it makes people feel like they're not just buying something, but that they're a part of something bigger" (C3I1, ref. 5).

Participants expressed a strong recognition of structural inequality in participants' communities. A participant from C4 expressed this sentiment bluntly, stating, "Poor people are getting screwed." A participant from C3 emphasized explained, "in order to do that and to do it correctly, one needs to address historical harms … structural harms within our society." To that end, however, several participants described challenges they face living up to these aims. Participants from C5, for example, discussed how they could do a better job "bringing in folks who are more affected," as "the people who are able to work on it are often the ones who are least affected." Further, one participant from C2 understood their organization as "a blend in the middle" between social and economic. Relatedly, another from C2 argued that "There's two categories of people that we can pull into what we have. We have the category who have a strong social conscience … and then we have the people who go, 'what's the ROI?' and that's all they care about." Such challenges demonstrate the overlap between this theme and previous challenges with democratic engagement – that is, challenges associated with internal governance structures and broader community input overlap with barriers implementing equity-focused initiatives.

4.2.2 Extending Alternative Practices

4.2.2.1 Theme 4 – Political Engagement

Summary

Participants across all groups extensively discussed entrenched power structures that impede their practices and limit energy democracy's transformative potential. Specifically, all cases emphasized issues related to regulatory capture (i.e., when regulatory agencies are dominated by the industries they are supposed to regulate) and policy makers who are unduly influenced by corporate interests. In this context, participants described varied approaches for engaging with policymaking. Some participants described a lack of faith that governments are capable of addressing these issues and favoured community-based solutions where governments simply stay out of the way, e.g., reduce regulatory barriers. Others described their organizations as being heavily dependent on government incentives and argued that governments need to be more actively involved.

In the theme of "Political Engagement," a central and repeating discussion among participants across all groups was the deeply entrenched power structures inherent in our political and economic system. This was seen by many as the most significant problem preventing governments from addressing these problems. A participant from C1 described how the "deeply entrenched capitalist monopoly, privately owned shareholder owned monopoly" … "they have no interest in seeing the value of their shares decline and want very much to maintain control over energy infrastructure … So I would say that in my evaluation that is the most significant problem." From C3, a participant argued that "energy companies are consistently some of the largest in the world. I mean, the world runs on the petrodollar still … it's an energy standard for even the world to run on economically." From C4, another participant went on to argue "Whether its Texaco in South America or Shell in Africa … we used to not know about it as they were very good at undermining democracy and shutting the eyes of the press … but now it's here."

The power these private interests have over political decisions was voiced across all organizations. C2 argued "that swing of those big corporations is why these legislation are written, how its written in the first place." Similarly, a participant from C3 explained:

> "Regulatory capture becomes pretty obvious when you start just letting people know the basic facts of what's going on, and the fact that this is a monopoly that has a risk free return on equity. The more you bring people into the system and educate them as to what's going on, I think they see pretty obviously, you know, what the deal is."

Another participant from C3 describe how, in contrast with community-based groups, utilities have "lots of lobbying money, lots of lobbyists. They seem to have unlimited staff and resources." This problem was largely seen as nonpartisan. C4, for example, described how despite being in a "blue state", environmental issues take a back seat. "They [large energy companies] write the laws." They went on to say, "all the governments, I mean, I don't know a single one that is really meeting the needs of the people." C5 described the close connections between their mayor (who appoints the Public Service Commission) and Pepco, as well as other utilities:

> "The PSC … is supposed to regulate these utilities, but its fully bought by the utilities." At the same time, this participant expressed caution that truly confronting that political power had not yet been tested: "I think that's something that we have not yet fully had to face because we haven't really mounted a serious challenge against Pepco yet. But I think once we actually try to take them face to face, I think that will become really clear, that power imbalance."

In the context of this problem, organizations engaged in two overarching ways: (4.1) *filling the gap*, i.e., how participants discuss inadequate government involvement and how they may be filling this gap, and (4.2) *traditional policy engagement,* i.e., how organizations engage in traditional policymaking, e.g., lobbying, and legislation.

Concerning *filling the gap,* several organizations saw their role as stepping in for the of government inaction within the local context they operated in, with some describing a lack of faith that governments are capable of addressing these issues. A participant from C2 explained how, "I'm not a big fan of government intervention … we want to create change. We want to do it ourselves and let the government get out of the way." They described how they faced regulatory barriers—community generation being bundled under small scale generation—and had

discussions with decision-makers attempting to appeal to them on the grounds that "this is a barrier. We are trying to do renewable energy without government subsidies." A participant from C1 described how when they first started operating the government was "actively hostile" to solar, and "we were very self-consciously, including in our advertising and discussions with community groups, seeing ourselves as supplying what the government was not." C1 is an interesting case because when the local government began working in this space, it was a contributing factor in them closing their doors, "There wasn't a strong need for us to continue." Since stepping aside, however, the government has not achieved the same level of community engagement, and this has resulted in considerable local opposition. It "gave us permission to step aside but it seems like in actuality what we've done is … seeded the territory on democratic decisions, unintentionally."

Notably, there is a tension among the groups featured in the study, with some participants believing strongly in the need for government support, and others feeling they need to go their own way. Several participants described how trust in government is a factor here. C4 described how, despite some well-functioning government owned utilities in the state, people see government mismanagement and don't trust they could operate renewable energy projects. "Financial scandals … have definitely colored people's perceptions about whether [governments] could run a utility," they argued. "People don't trust that their local governments are going to be competent at handling a project like this." C5, who actively campaigns for municipal ownership, expressed that these were issues they are currently wrestling with. "It's funny, I always kind of imagined … I maybe had a biased view of assuming government intervention would be the answer … I'm not sure if it's the only way to solve these problems."

Concerning *Traditional Policy Engagement,* several organizations discussed the variety of ways they were engaging in policy. A participant from C3 described being "heavily dependent on

what happens at the Capitol," and they "need to be staying very up to date on the latest bills." They noted that major swings in policy "would be very challenging and I think [we] might not be able to weather that. We'd have to think really hard about changing our business model and what we could do and different things we could do." They described how they are "a higher capacity organization than most other energy democracy organizations." As such, they are actively involved in advocating for various bills. C4 described how a lot of their work is focused on the courts, regulation, and legislation. "You have to devote all your time and energy to get in front of these lawmakers." They go on to say that "there's political ways of getting this stuff done, and we create very deep relationships with lawmakers that we know really care and have and want to work for these issues." Another participant from C4 described how "you gotta get people elected," and then create strong relationships with them; "this is where we spend probably a lot of our energy." A further component of engagement with policymakers was education, which was seen as important for challenging information advanced by corporate interests. A participant from C3, for example, explained "lots of legislators do not have the in-depth knowledge of the energy system because of its insane complexity and all of its nuances. And Xcel and other utilities are kind of seen as the trusted source of information." While utilities may be knowledgeable in this area, they also present one-sided perspectives that favour their interest.

Through policy engagement, groups across the study described various efforts and successes. As was described in Section 4.1, C4 successfully lobbied against the acquisition of Public Service Company of New Mexico (PNM) by Avangrid, whose parent company is the Spanish energy giant Iberdrola, which a participant described as "the biggest win of my life." C5 has largely focused their efforts on lobbying policymakers, including the No Pepco Pledge, where candidates for City Council would pledge not to take money from the utility or have closed door meetings. Building

off this effort, they launched the Public Power Pledge to get candidates to explore public power in DC. At the same time, however, participants also described how they, and other local groups with limited capacity, struggle to engage at the policy level. While C2, for example, has had conversations with policymakers, they explained that given the higher capacity corporate interests they are up against, "I'd say we haven't really lobbied. We haven't really pushed this … to change that would be quite difficult." A participant from C4, with more experience confronting power directly, also described the reality they face: "Everything is going in the wrong way and with our small efforts, you know, I'm not sure it matters enough or will matter enough in time [of the climate crisis], so it's very painful for me to have to say this."

4.2.2.2 Theme 5 – Building a mass movement

Summary

Participants across all cases described the importance of coalition-building, including within and beyond the energy sector, in order to build a mass movement for change. Participants were commonly motivated primarily by the potential to work together to challenge large corporate interests. Several cases noted that coalitions outside of the energy sector, e.g., health and labour, could build the support needed for transformative policy change. Notably, while all organizations shared commonality on key issues, differences emerged that may impact movement-building – e.g., while some participants explicitly identified as socialist, others did not see themselves in these terms. In light of these differences, many participants argued that energy democracy may be a path that bridges traditional ideological difference, i.e., given that people across ideological divides are similarly disillusioned with conventional narratives and approaches for energy transitions.

In the theme of "Building a Mass Movement," participants emphasized the importance of building a mass movement for change and outlined their efforts in this area. Participants discussed (5.1) *Coalitions Across Sectors and Interests*, i.e., how organizations contribute to coalitions through networks, and how they are building alternative structures of political/economic power, and (5.2) *Embeddedness in Broader Discourses and Social Movements,* i.e., how participants situate their practices in broader social movements, discourses, or ideologies.

Concerning *Coalitions Across Sectors and Interests,* participants across all groups in the study described collaboration building with likeminded organizations in and outside of the energy sector. Several organizations described coalition building as a means of building political power that counters incumbent actors with substantial political influence. A participant from C2 explained, "I see it as critical because I know how stuff happens when you have the big guys all get together with the lobby groups and have a common voice." They described their efforts, which are still in the early stages, to build a network of renewable energy cooperatives in Canada—where, unlike in the United States, networks of energy democracy actors across provincial boundaries have been limited. Similarly, a participant from C3 explained, "you're stronger together, you can pull resources, and you have a bigger say when you're not one individual group." They described forming coalitions with likeminded organizations outside of the energy sector, e.g., health-based organizations, to speak towards Public Utility Commission (PUC) decisions They explained that "mass numbers of people demanding" is the "most effective way of getting the PUC to listen to us". They stated that building alternative structures for political power is the main purpose of their coalition-building efforts—this was their way of pushing back against regulatory capture. They continued, "It's not just getting more solar, it's how do we do that solar and how we … make sure everybody gets to be a part of that." Logistically, having a cohesive group presenting their interests was seen as a strength. C2 explained "We've been told by some bureaucrats, you know, we want to talk to one group. We don't want to talk to a bunch of you." Similarly, a participant from C3 described meeting with local, regional and national groups as they are "trying to provide cohesion to the movement and spread it."

Coalition-building with groups outside of the energy sector was commonly discussed by participants. A participant from C1 explained how all their volunteers were connected to other

local initiatives, including environmental issues, antipoverty coalition, and low-income housing. From C5, a participant described the importance of collaborating on environmental justice and racism issues, e.g., fighting against harms from waste, which primarily impact black and working-class people. "It's the same fight," they described, "and it's the same people who are being impacted by all these issues." These collaborations were seen as a way to "build community and strategy." One participant from C1 described how challenges in the energy sector, while sometimes seen as unique due to the complexity of energy systems, shared important commonality with challenges in other sectors:

> "I think it is not unique. We have the same question to be asked in the health sector. We have the same question to be asked in the childcare sector … The investment needs for building the infrastructure in each of these sectors prevents or becomes a barrier for community ownership and policy imperatives are slightly different … So it might seem like it's unique … but in principle I don't think it's different … It's all the mindset of the state that is kind of the fulcrum of things."

At the same time, participants also described challenges with coalition-building. A participant from C3, for example, described that while the majority of labour groups understand that social justice and labour go hand in hand, "there are certain sections of labour that are … calcified in the old way of thinking … they're sort of going with the whims of big business." Similarly, a participant from C4 described:

> "I'm a union member … unions are important to me. And one of the hardest things about the bill we ran is the fact that they came out against [it]. … they're kind of our death knell really. … If we could build an intersectional movement around labour and climate … we would have enough power to push it over the edge and win." Despite challenges, they stressed, "there's always disagreement," but "there is no other way. We got to get together." They went on to say "It's all about building power … I don't think we can win without getting beyond our echo chamber."

Concerning *Embeddedness in Broader Discourses and Social Movements*, participants described how they saw themselves within larger social and environmental movements, discourses

and ideologies, which exposed both overlap and difference. All organizations emphasized their embeddedness in broader conversations that link energy transitions with social equity concerns—this interconnection was a key driver according to many participants. A participant from C1, for example, explained that their work "was very much part of the broader national and international conversation that is going on about the necessity of responding both to the grotesque inequalities that are present in our own and world civilization and part of a meaningful attempt, at however, small scale, to address the threat of climate change." Similarly, a participant from C3 argued:

> "I think people are frustrated by multiple things when it has to do with our energy. That is, you know, shut offs, the rising cost of energy, the increasing visibility of the profits of these companies, the concentrations of those profits … and the pace of the transition … All of those things kind of converge, neatly, I think, in energy democracy … there needs to be massive structural changes … but there are solutions to be had."

At the same time, however, there were important differences between groups pertaining to energy transitions. While participants from C4, for example, emphasized the necessity of always challenging fossil fuels, participants from C2 described frustration with groups who think we need to "turn off the tap" immediately. Speaking directly to my standpoint, they explained, "Coming from Newfoundland, you probably understand how important oil sands are to the eastern Canadian economy … I don't think people in Ontario get that." They described how many of the jobs in Alberta are somehow connected to the oil and gas sector, meaning that a fast-paced energy transition could be more complicated than some environmentalists claim. Another participant from C2 described the oil and gas culture they were embedded in – "This is the land where if I show up in a Ford F-150 at an industrial site, people would ask me why I'm driving my wife's truck … I'm not exaggerating at all." While they described support within their specific local context and community, they also face pushback online "if we boost the post or something, that's where the negativity comes in. Lots of laughing faces. Lots of angry faces. I don't know how renewable

energy makes people angry." In this context, pushing too hard or too quickly on transitions was seen to carry considerable risk.

Notably, participants across all groups expressed frustration with how energy transitions are commonly framed. A participant from C5, for example, described how many of their members found the "energy transitions narratives, the mainstream narratives, have been framed as very much like it's another form of trickle-down economics … it just felt deeply unsatisfying." While some saw their work as explicitly anti-capitalist, others distanced themselves from those ideas. A participant from C2 explained, "Bear in mind that four years ago, co-ops were, in my mind, a bit of a socialist notion and socialist thing. And I hadn't paid much attention to them." C5, who is explicitly rooted in ecosocialism, argued that "we need to appeal to more than socialists." C3 described how changes in the political landscape, while often seen as a barrier, may present opportunities to appeal to people outside of their usual circles:

> "The current political right is different and evolving … there is a new wave that is anti-monopoly, anti-big business … they're not necessarily for the reasons that progressives are against, but they are against this concentration of wealth." They therefore argued "I feel like … people could be brought over … like, why are you sticking up for this investor-owned monolith?"

Several organizations described "the moveable middle" and the importance of "targeting the right people and getting beyond our circle." Similarly, C4 argued "So there's three groups of people. Essentially, there's people on your side. There's the people who will never be on your side. Then there's the swing. This is community organizing, right? You spend your time with the swing people."

4.2.2.3 Theme 6 – Social and cultural change

Summary
Participants across all cases described the importance of contributing to social and cultural change through bottom-up community action. Some participants described how their practices

demonstrate to local people that alternative solutions are possible, which was seen as important for challenging narratives presented from large utilities. Participants across all cases also discussed education and learning as a key aspect of their practices While this sometimes involved conventional energy-related education, e.g., addressing energy literacy, it also often involved political education related to alternative models of ownership and countering information provided by investor-owned utilities.

In the theme of "Social and Cultural Change," participants discussed both (6.1) *demonstrating what is possible,* i.e., how organizations demonstrate how alternative practices and achievements are possible, and (6.2) *education and learning*, i.e., how organizations educate and learn, including internally and externally within their community.

Concerning *demonstrating what is possible*, several organizations emphasized that they saw part of their key contribution to be, not just opposing the current ways of doing things, but actually demonstrating alternatives were possible. C1 described how "the simple fact of installing the technology, making it visible was also a contribution to the larger community." Through these efforts, they became "the most densely populated set of solar installations in the province" and likely contributed to mindset changes in a context where government officials went from being actively hostile to involved in this space. A participant from C4 described how they strategically selected brick and mortar community installations. Specifically, their activities involved installations at fire stations, where "Firefighters are in people's minds as saving lives and protecting loved ones, and they're on the front lines." They also described how Indigenous owned projects could change perspectives, both combatting racism and showing that they don't have to rely on utilities who aren't giving them what they need. C4 also thought about opportunity to demonstrate what is possible this in bigger terms:

> "I live in Santa Fe, which is a gorgeous place that's an international tourist area, people come from all over the world. … What if Santa Fe were 100% solar? Would it change the world? I don't know, but maybe it could … we could say you can do it too. So why

> not? Why not do it for your city? … And so that's the thing is that exposing the vision of what's possible turns the theoretical … into reality"

Concerning *education and learning*, education was at the forefront for most organizations, including internal education for members of their organization, and education for the community they are embedded in. A participant from C1 explained, "education was self-consciously part of what we were trying to do." Some education initiatives include, for example, addressing energy literacy issues and understanding technology options, where community education took place in local spaces, e.g., churches and community centres, as well as partnerships with local educational institutions. Notably, a participant from C4 described how renewable energy is uniquely able to help with education:

> "And so one of the great things about solar is it's really close to reality. It's why nature matters so much, right? … You know, if you don't pay attention when you're walking across the tree that has fallen … across a little stream, you're gonna get your foot wet … 'My foot is wet because I fell in the little stream'. But if you pay attention and you got your balance right … you can get across the stream and not get yourself wet. And so that's what solar does to us. It's right there and it teaches us."

In addition to these efforts, education seemed to also be understood as a means to counter the narratives presented by utilities and other corporate interests. A participant from C3, for example, described the importance of pointing out to people the cases in which regulatory bodies are not acting in the public interest: "I think it's a no brainer for people to see that this [who benefits] doesn't have to be the case and shouldn't be the case." They argued "the more you educate them on the effects of not having these things socialized or democratized" … "it just becomes an obvious decision for people." Similarly, a participant from C4 described how powerful interests actively take advantage of how confusing the public finds energy systems:

> "There's a lot of lies being told and people with a lot of money can tell more lies … They say they would save us a lot of money and it's not true … your community is not going to be wealthy. So we have to figure out how we can reveal the truth to those

> people." This is difficult, they argued, especially in context where overall education is lacking. "You have to meet people where they are, and that's absolutely key. You got to work with the people that you are trying to help … We try being aggressive in telling the truth because no one else seems to be doing it."

In this context, some participants argued that community-based organizations also need to also educate people who feel they already have all the information they need. A participant from C3 explained:

> "There is pushback amongst the so-called more educated folk that will say, 'well, you know, we don't have time … this is messy, what you're doing. It's chaotic. Yeah, it's noble, but we don't have time in this transition.' And I think the more you educate even the so-called educated and that as to like, okay, well, what are the timelines of a utility scale? … They are not really taking into account … what's actually going on."

A participant from C4 similarly argued, "even educated people don't know … They aren't familiar with this, and that's one of the ways companies have gotten things done." In this context, participants across several cases described how expertise in energy systems was not always sufficient; rather, more political education was often just as relevant. Notably, a participant from C5 described how within their organization, even though they have energy system experts "knowing every detail of how that's going to look should be a prerequisite for advocating for it." They instead emphasized the need for experimentation and adjustment based on community need to help determine what energy what energy democracy should look like.

Chapter five: Discussion

Although five illustrative cases do not represent an adequate sample to make definitive claims about ED, they nonetheless provide insights into key questions and critiques pertaining to ED. The following discussion chapter describes these insights, including a discussion of (1) lessons on energy democracy in-practice and (2) takeaways for energy democracy researchers. Following this discussion, the conclusion chapter then considers how the study findings address the research question, "Which practices are energy democracy actors enacting, and how are they extending these practices to contribute to the transformation the movement advocates for?"

5.1 Lessons on Energy Democracy In-Practice

5.1.1 Motivations: Structural change over mere participation

As was described in the literature review for this dissertation study, a key critique of energy democracy is related to a potential overemphasis on local participation in energy decisions. Specifically, some scholars have argued that democratic practices do not lead to just outcomes (e.g., Drubi et at., 2022) and the energy democracy movement has been referred to as naïve for its over-emphasis on procedural practices (e.g., Jenkins, 2018). This perceived naivety is related to documented limitations with local participation. For example, local participatory processes often involve "the usual subjects" who may not be the community members most impacted by energy decisions, and community members may not be listened to when their engagement is merely listened to alongside decisions that have already been made (Berka et al., 2018). In this context, where energy democracy is associated with only with participatory processes, scholars have sometimes struggled to differentiate and make a case for energy democracy. Importantly, such critiques in academic literature could potentially contribute to challenges for energy democracy

in-practice, given that alongside these debates, supportive policies in many countries have seen a dramatic rise and fall in recent years (Berthod et al., 2022)

The cases presented in this study capture a more complicated picture than energy democracy may sometimes be characterized. On the one hand, participants described a wide variety of democratic practices. At an organizational level, most organizations included in the study saw democratic participation of volunteers and organizers as fundamental to their mission and practices. At the broader community input level, all organizations in the study described an emphasis on community input and the increased agency of community members, who were treated as active stakeholders in energy decisions. At the same time, however, participants repeatedly emphasized the limitations of broader community involvement, sometimes expressing a palpable realism related to participation that challenges naïve framings of energy democracy. At times, I had the sense in interviews that participants were cautioning me away from such naiveté if they sensed I may be overemphasizing community involvement in their day to day activities. Participants discussed the immense barriers community members face in participatory processes, including limited time and capacity due to the multitude of challenges people face in their daily lives, and historical legacies of oppression, where many residents may experience an understandable apathy based on the assumption their voice will not be listened to.

Rather than participation for participation's sake, interviewees across all cases instead seemed to instead emphasize a shift in who they are responsible or accountable to. That is, rather than being accountable to shareholders and corporate interests, their organizational structure—specifically, collective ownership models—reshaped social relations in their community so that community members became the active stakeholder they are responsible to. While this arrangement may not always be a guaranteed overcome all challenges or injustices, it enabled them

to make decisions that are not entirely based on maximizing profit for private interests. This finding suggests that, for energy democracy actors, energy democracy may be understood as a strategy for enabling a more just energy system, rather than an end goal in and of itself. For most study participants, this approach seemed to represent a fundamental and structural difference from conventional arrangements in the energy sector.

5.1.2 On Difference

In contrast with similar equity-related concepts in energy transitions literature—e.g., energy justice, which has been characterized by measurable tenets of principles of justice—energy democracy has somewhat notoriously been framed as a 'slippery' or 'fuzzy' concept that is difficult to define (van Veelan & van der Horst, 2018). While some scholars have attempted characterize energy democracy more definitively (e.g., Goodwin, 2023), others have resisted a narrow and static definition, arguing that doing so risks flattening local differences (Angel, 2016). The findings from this dissertation study have led me to echo the concerns that we should resist oversimplifying difference across local practices. While shared commonalities across all cases were prominent, there is a notable diversity in practices and perspectives even among this small group of cases featured in the study. In particular, two differences that stood out pertained to (1) the pace of energy transitions and (2) the type of ownership (i.e., public vs community-based).

First, considerable differences were evident regarding fossil fuels and the pace of energy transitions, which seemed to reflect local histories and political economies of organizations featured in the study. For example, participants from New Energy Economy, based in New Mexico—a state with a long history of nuclear waste and environmental racism dating back to the Manhattan Project—argued passionately against the continued use of fossil fuels and nuclear alternatives. In contrast, members of the Bow Valley Green Energy Cooperative, located in

Alberta—a province that is highly dependent on fossil fuels and has a legacy of federal resource decisions that are not made in Alberta's interest, leading understandable skepticism of federal government involvement in provincial energy sector—expressed frustration with people who feel we can immediately turn off the tap of fossil fuels. Both organizations, while seeing these issues very differently, also shared extensive common themes, practices and motivations—i.e., despite their differences, energy democracy is a label, idea and organizing principal that both groups connect with. Further still, despite varied perspectives on transitions, the environmentally sustainable solutions they advanced, e.g., collective ownership renewable energy on community buildings, were largely aligned.

Second, the issue of ownership also emerged as a major point of divergence among the organizations studied. Some groups in the study specifically advocated for public ownership, viewing local government ownership and control as preferable to existing investor-owned utilities. Others expressed skepticism that governments are capable of addressing local concerns and preferred to avoid government involvement. Others still preferred local and community-based ownership practices but saw them as requiring government support and incentives. Across these differences, however, participants generally agreed that investor-owned utilities with no ties or accountability to local people were not the path to bring meaningful change. They also frequently described how government officials often lack an understanding of collective ownership options, which, accompanied by undue influence of corporate lobbyists, led to considerable challenges for the energy democracy movement. The differences of how ownership should be structured, alongside their many similarities, reflects energy democracy scholars who argue that different community contexts (e.g., population, density, culture, and infrastructure) can influence the feasibility of collective ownership models and there is no on-size-fits-all solution (Baer, 2012).

Many participants in the study acknowledged they were actively experimenting and grappling with these differences, with some sharing that their perspectives on government involvement were evolving based on their experiences.

Given the small number of cases featured in the study, it would be difficult to draw explanatory connections between contextual features of cases and the actions they taken on. However, the results illustrate how locally rooted organizations are shaped by the communities they arise in, and reinforce arguments that energy democracy may be best left flexible and unconstrained by static, measurable components.

5.2 Takeaways for Energy Democracy Researchers

5.2.1 Supporting Transformation

Energy democracy literature has grown substantially since 2018 (van Veelaen & van der Horst, 2018). Of that literature, a considerable amount of scholarship has focused theoretical understanding the concept. These investigations have been useful for better understanding the energy democracy movement, and lessons learned have contributed to the broader literature on transitions, e.g., by introducing 'system change' discourses into transitions literature. At the same time, as I've reflected on the more transformational efforts that energy democracy actors described for this study, I am reminded of the anarchist thinker Pierre-Joseph Proudhon's words: "We have spoken too much, but we have done nothing" (Proudhorn, 1848). In other words, while not discounting the lessons that arise from theoretical investigations, it may be time for researchers to shift their focus from merely documenting activities to actively supporting the transformative processes that energy democracy advocates are pushing forward.

For researchers interested in advancing energy democracy, there is potential not only to study these phenomena but also to actively engage in and facilitate the transformative processes

advocated by the energy democracy movement. To do so, however, research must go beyond theoretical exploration and contribute to the practical facilitation of transformation. In other words, scholars should consider strategically how their work can contribute to on-the-ground struggle. This could involve, for example, supporting energy democracy networks and coalitions. In the US-context, networks such as the Energy Democracy Project—a collaboration of more than 30 diverse, local, frontline organizations across the United States (Energy Democracy Project, n.d.)—brings together local actors to share lessons, strategies, and mobilize politically. While such networks do not yet exist in Canada, the results from this study suggest there is interest in the facilitation of such networks, and academic institutions may be well positioned to support these efforts. Additionally, academics seeking to advance energy democracy may wish to move away from solely focusing on individualistic energy information for transitions (i.e., practical strategies to reduce household energy consumption) towards also explaining systemic problems and collective solutions (i.e., educational approaches that specifically counter dominant framings from corporate utilities). Academic partnerships aimed at supporting network building could learn from energy democracy actors doing this work and provide meaningful assistance disseminating these ideas.

5.2.2 Framing energy democracy: Reconnecting with the political

The political nature of energy democracy poses challenges in the communication of these ideas, leading some scholars to consider whether energy democracy may be too political to see widespread support. Perhaps to overcome this limitation, there seems to be a tendency to depoliticize these energy democracy's framing to avoid alienating readers. While such concerns are understandable, it also seems to have led to confusion about what energy democracy means, thereby contributing to a watering down of its transformative potential in practice.

This dissertation, as well as the energy democracy paper published alongside this research (see Appendix C), opts for a more intentional approach of linking energy democracy to anti- and post-capitalist scholarship and practice. Wrestling with how these connections should be addressed has been front of mind throughout this process. While recognizing the risks associated with connecting energy democracy to radical theory, my sense is that we may be understating the risk of severing connections with the extensive histories and lessons that would come from these connections. In particular, prefigurative politics, as well as social movements aligned with anarchism/libertarian socialist ideals, have tended to receive limited scholarly and media attention. Instead, libertarian versions of socialist practices have often been sidelined in public perception, leaving socialism being seen as synonymous with 'big government' and state control. This gap is important given that most on-the-ground grassroots movements since the lend of the 20th century—including the Occupy movement, Black Lives Matter, the rapid increase of mutual aid groups over the last decade, and energy democracy—have largely embodied prefigurative practices. Thus, ignoring or minimizing these connections not only risks impoverishing the intellectual foundation of the energy democracy movement by neglecting lessons from past experiments. It also avoids building bridges and solidarity between these aligned movements in other areas of our social and economic life.

Given the disillusionment with existing political and economic systems across conventional framings of the political spectrum, this research may support arguments from prefigurative politics and economic democracy scholars who claim these frameworks appeal to a wider range of people than conventional framings of ever increasing political divides. That is, we may agree on more than we realize. Thus, while the risk of alienating some individuals with politicized language is real, and we should consider our choices strategically, it is my belief that

the potential benefits of reconnecting energy democracy with the histories, lessons and ongoing scholarship associated with libertarian socialist thought—including concepts like economic democracy and prefigurative politics—far outweigh the drawbacks.

5.3 Study limitations

This study is subject to several methodological constraints that may influence the interpretation of its findings. As has been stated previously, a key limitation is the small sample size, as the analysis was based on only five cases. While the limited number of cases reduces the breadth of perspectives and contexts represented, which may narrow the transferability of the findings, the study's emphasis on depth and contextual richness over statistical generalizability aligns with the aims of constructivist research. Efforts were made to enhance the depth of analysis by including detailed thematic examinations alongside supplementary information about each case and its specific location, allowing for a nuanced understanding of the unique contexts. Nonetheless, the narrow scope still limits the diversity of experiences captured.

In addition, the case selection process itself may have influenced the range of perspectives represented: of the 20 organizations invited, only five ultimately participated, with two others withdrawing due to limited capacity. This raises the possibility that groups with fewer resources—often including racialized and low-income communities—were underrepresented, which is a particular concern in this field where diverse voices are critical. Another limitation concerns the data collection methods. The study relied primarily on interviews, which, while providing valuable qualitative insights, could have been further enriched by integrating survey data and specific quantitative metrics related to community impact. The absence of these additional data sources may have constrained the ability to draw more comprehensive conclusions about the broader

effects of the cases studied. These limitations in scope and methodology highlight the need for caution when interpreting the results and considering their applicability to different contexts.

Chapter six: Conclusion

The findings of this study demonstrate that energy democracy actors engage in a range of practices that shift power dynamics within their local communities. Although participants across all cases describe practices that embody alternative social relations and make tangible differences for local people, contributing to broader transformation requires more than small, local, and isolated experiments. Reflecting this sentiment, one study participant emotionally noted, "Everything is going in the wrong way and with our small efforts … I'm not sure it matters enough or will matter enough in time … it's very painful for me to have to say this." This statement underscores the challenges faced by energy democracy actors as they consider strategies to scale their impact.

In order for energy democracy actors to contribute to the larger-scale transformation they advocate for, a greater emphasis—both in practice and in research—must be placed on this second, more systemic component. In practice, on-the-ground organizations seem aware of the need to organize collectively in order to scale their impact. Without using the exact terminology, they describe the importance of constructing 'dual power' structures to drive meaningful change—i.e., developing alternative bottom-up structures of power through broader coalitions and organizing. To some extent, they are engaging in these efforts by connecting with likeminded organizations in the energy sector or community-oriented organizations within their local context. However, given limited capacity as they focus on local concerns, these organizations are unlikely to expand these initiatives to the necessary scale on their own. Moreover, while they recognize the importance of forming broader connections beyond the energy sector, such as labor movements, building such coalitions is fraught with barriers, such as narratives pertaining to limited job availability in a low carbon energy economy. As other energy democracy scholars have noted, the movement is unlikely to make a meaningful impact with a siloed struggle in the energy sector. Thus, the limited

practical ability for many energy democracy actors to engage in these efforts is one of its most significant barriers.

In this context, it is my hope that this dissertation study illuminates the important role for researchers in system transformation efforts, as the findings highlight important areas where academics interested in energy democracy could provide support. Rather than focusing primarily on defining and conceptualizing energy democracy, energy researchers can play a more impactful role by contributing to the building of networks, solidarity, and coalitions, and by investigating research questions pertaining to broader efforts for systemic transformation. To support these efforts, as researchers, it is worth shifting the focus of inquiry from "What is energy democracy?" to questions that explore how local initiatives might scale into more transformative structures. Such questions might include: 'How can these structures be designed to maintain their core values?', 'How can groups with diverse local contexts unite around shared goals?', and 'What role can researchers play in supporting these processes?'. It is through such investigations that like-minded scholars can not only understand the energy democracy movement, but also meaningfully support it.

With these opportunities and challenges in mind, this study positions energy democracy within the broader context of prefigurative social movements, framing it as a coherent political project rather than a collection of disconnected local efforts. Understanding energy democracy through this lens not only sharpens academic discussions of its transformative potential but also highlights the power of prefigurative politics as a framework for building the solidarity and collective strength needed to drive systemic change. By aligning with broader social movements, energy democracy actors, including academics, may find opportunities to engage in shared struggles, leverage collective resources, and contribute to a larger movement toward a democratic

economy. In this way, energy democracy's role extends beyond energy systems—it becomes part of a broader vision for systemic transformation.

At this pivotal moment of energy system reconfiguration, there is a unique opportunity to transition to low-carbon technologies while also building a more just and democratic energy sector. However, entrenched corporate interests remain well-positioned to obstruct and shape these transitions to preserve existing power structures and inequities. At the same time, the political landscape in many Global North countries is shifting toward right-wing governance, underscoring the urgency for activists—both organizers and scholars—to rethink strategies. Neoliberal, profit-driven approaches to energy transitions have alienated communities, eroded public trust, and fueled backlash against renewable initiatives. Rather than dismissing energy democracy as naïve, it is time to seriously consider it as an alternative to these dominant models. Still, as participants in this study recognize, small and isolated initiatives alone cannot meaningfully challenge entrenched power structures. The future of energy democracy depends—at least in part—on its ability to move beyond fragmented struggles and become part of a collective movement for systemic transformation.

Appendices

Appendix A: Glossary of Terms

Term	Definition
Anarchism, i.e., libertarian socialism	Anarchism, as defined by scholars like David Graeber, is a political philosophy and social movement advocating for a society organized without hierarchical structures of authority, including the state or capitalism. It emphasizes voluntary cooperation, mutual aid, and direct democracy as alternatives to imposed power structures. 'New anarchism' adapts traditional anarchist principles to contemporary social and political contexts, emphasizing decentralized power, social justice, and direct democracy over all areas of the economy. It integrates modern social movements and critiques hierarchical institutions while promoting practical strategies for achieving egalitarian and cooperative systems.
Capitalism	Capitalism is an economic system characterized by the private ownership of the means of production. In this system, those who do not own these means (i.e., workers) are employed by those who do own them (i.e., capitalists). These workers are paid wages to produce goods and services, which are then sold in a market for profit. A key feature of capitalism that is important for the context of this study, as highlighted by Stuart et al. (2020), is the way the production process is organized. Capitalism involves a specific class relationship where the production of goods, services, and new means of production is driven by the need to generate profit. The system is based on the principle that production is primarily for exchange rather than for direct use, and its profitability on the market determines the continuation and expansion of production (Wallerstein, 1979). Moreover, in capitalism, part of the surplus created in the economic process is reinvested to reproduce and expand the production process. This reinvestment can take the form of new technologies that increase productivity, the employment of supervisors, or the use of advertising to boost sales. The ultimate goal of a capitalist system is to create profits and continuously generate more profits, i.e., the endless growth imperative, which is achieved by reinvesting part of the surplus back into the economic process (Stuart et al., 2020).

Critical theory	Critical theory refers to a philosophical approach that reveals and critiques societal power structures and inequalities. It emerged from the Frankfort school in the early 20th century, and now encompasses a variety of Marxist, post-Marxist, feminist, and postcolonial critiques (Stuart et al., 2020).
Dual power	Dual power may be understood as a theory of change for societal transformation. It is a concept in political theory that refers to a situation where two distinct and opposing authorities or powers coexist within the same society, each vying for legitimacy and influence. This term has its roots in revolutionary contexts, where emerging movements or forces begin to challenge existing state power, creating a duality of governance. Carl Boggs (1977), a political theorist who introduced the term "prefigurative politics," discussed dual power in relation to social movements that establish alternative structures of governance. These alternative structures might include grassroots organizations, community councils, or other forms of collective decision-making that start to exercise control over key aspects of social, political, or economic life. For Boggs, dual power represents a critical phase in the evolution of social movements, where the old order and new, emerging structures coexist. This concept is important because it highlights the importance for local and small-scale social movements to form alternative structures of political and economic power, e.g., through networks and strategic cooperation, in order to meaningfully challenge deeply embedded powerful interests.
Economic democracy	Economic democracy may best be understood in contrast with capitalism, where a defining feature of capitalism is the 'quarantining off' of the economy from the public sphere where collective decision-making is possible (Wright, 2021). In other words, capitalism is argued to involve political democracy, but economic dictatorship. Thus, 'economic democracy,' which welcomes economic decisions into the public sphere, is inherently a non-capitalist or post-capitalist economy. According to economic democracy scholars, the concept is fundamentally equivalent to socialism (Wright, 2021)—or rather, it embodies a vision of a future socialist society (Malleson, 2014).
Energy democracy	Energy democracy, while sometimes argued to be a 'slippery' or 'fuzzy' concept that is difficult to define (van Veelaen & van der Horst, 2018), has been conceptualized as an emergent social movement (Feldpausch-Parker et al., 2019; Burke & Stephens, 2018), where citizens are imagined as active participants in the ownership and control of whole energy systems, from

	energy production through to consumption (Feldpausch-Parker et al., 2019; Szulecki, 2018). The movement highlights how structural transformation, rather than regulatory 'tweaks,' is required to meaningfully mitigate environmental catastrophe and build a more egalitarian future (Sweeney, 2012). To structurally reshape these systems, ED advocates for the reconfiguration of social relations in energy systems, i.e., through collective ownership and democratic control of energy (Van Veelen & van der Hurst, 2018; Stephens et al., 2018; Wahlund & Palm, 2022).
Energy justice	Energy justice is a concept developed by academics and scholars concerned with energy injustices throughout whole energy systems. Energy justice scholars apply principles of justice to critical energy issues, such as energy poverty and energy security (Jenkins, 2018), and through such applications, the concept has been seen as a useful tool for analyzing particular contexts and challenges (Sovacool & Dworkin, 2015).
Energy transitions	Energy transitions may be defined as "a shift in the nature or pattern of how energy is utilized within a system" (Araújo, 2014, p. 112). An important idea—and one that is central to the motivations of this dissertation---is that energy transitions are not an "apolitical phenomenon" that exist "irrespective of human culture," but rather are fundamentally linked with broader social and political structures (Lennon, 2017, p. 19).
Grassroots	The term 'grassroots' is a somewhat fuzzy concept, where the differences between grassroots and traditional non-profit organizations can sometimes be difficult to distinguish (Toepler, 2003). Traditionally, the concept has referred to "the basic building blocks of society", including, for example, small rural communities or urban neighbourhoods. However, as global issues attract mass mobilization, the 'local' boundaries of grassroots have been transformed (Batliwala, 2002). As such, Batliwala (2002) argues that grassroots and nongrassroots actors should be distinguished in terms of "degree of vulnerability" to policy and economic shifts. In other words, "grassroots can be a relative rather than a static term, but should always refer to those who are most severely affected in terms of the material condition of their daily lives" (p. 396).
Interstitial transformation	Interstitial transformation is a theory of change commonly associated with prefigurative social movements and economic democracy. Although the idea stems further back to anarchist politics, the terms was developed by Wright (2010), it involves building "new forms of social empowerment in the niches and margins of capitalist society" that cumulatively generate a qualitative

	shift in the dominant social system (p. 303-305). Wright (2010) contrasts 'interstitial transformation' with other theories of system transformation within radical left theory: the revolutionary socialist approach of '*ruptural transformation*', envisioned as a sharp break with existing institutions and social structures through direct confrontation and struggle; or the social democracy approach of '*symbiotic transformation*', which involves strategies to extend institutional forms of social empowerment that simultaneously help solve problems by dominant classes and elites. Interstitial transformation, like prefigurative social movements and economic democracy, is most closely associated with anarchist theories of transformation.
Prefigurative social movements, i.e., prefigurative politics	Prefigurative social movements have been defined as the "experimental implementation of desired future social relations and practices in the here-and-now" (Raekstad & Gradin, 2020). Unlike protest-based social movements, prefigurative social movements construct alternative social relations on a micro level, thereby instantiating radical social change in and through practice (Törnberg, 2021; Yates, 2015). Prefigurative practices may include, for example, worker-recovered enterprises, eco-villages, community gardens, and movements toward economic democracy or degrowth (Schiller-Merkens, 2020). Given that prefigurative initiatives are examples of the building blocks theorists describe in visions for a democratic economy, they have been linked directly with radical and economic democracy scholarship (Jossa, 2020). Ultimately, the aim is to transcend capitalism "by tackling social reproduction, by embodying change, and by radically reshaping human needs, habits, and beliefs" (Monticelli, 2021).
Radical democracy	Radical democracy, like economic democracy, shares a commitment to the integration of politics and economics, and actively welcome democratic practices into the economic realm (Bowles & Gintis, 1987). However, radical democrats may go further in challenging Marxism as centering class-based politics above all other differences and identities (Little & Lloyd, 2009; Tønder & Thomassen, 2005). As such, radical democracy refers to "democratic theories that advocate the expansion of democratic processes and activities into more and more spheres of life while also pushing for more direct forms of participation" (Vick, 2015, p. 206). That is, they welcome democracy into any sphere of domination and oppression—not only as it relates to class.

Social relations	At a basic level, social relations merely refer to how people are related (i.e., connected) to each other. While some social relations are voluntary and freely chosen, others are involuntary due to a broader social or economic structure. For example, within capitalism, workers must enter into a social relationship with capitalists (the owners of the means of production) in order to survive—i.e., an involuntary relationship. In the energy sector, communities must enter into a social relationship with the owners of energy production. Thus, energy democracy, which shifts energy ownership to communities, challenges social relations in the energy sector.
Theory of change	A theory of change is a conceptual framework that outlines the process through which a desired long-term outcome is achieved by specifying the necessary steps or conditions that lead to change. It helps to map out the causal pathways linking actions to outcomes. A theory of change serves as a tool for assessing whether specific efforts or initiatives are contributing to long-term goals, providing a basis for reflection and learning.

Appendix B: Interview Script

	Main Questions	Sub Questions
Enacting Alternative Practices *For this first group of questions, I'm interested in hearing more about what practices/actions/ programs your organization is involved in that advance alternative forms of energy ownership and decision-making.*	1 Could you describe practices your organization is involved in that advance alternative forms of energy ownership?	Who is involved in these new forms of ownership?
		How are they involved specifically? What does ownership look like?
		How do they benefit from ownership?
		Are there any people that are underrepresented in these new forms of ownership?
	2. Could you describe practices your organization is involved in that advance alternative forms of energy decision-making?	Who is involved in these new forms of decision-making? (does this overlap with ownership?)
		How are they involved specifically? What does decision-making look like?
		How is decision-making supported, e.g., information and education?
		Are there any people that are underrepresented in these new forms of decision-making?
Extending Alternative Practices *For this last group of questions, I'm looking to hear about the impact of the practices you've described, and also to understand opportunities to advance these practices on a larger scale.*	3. Do you think these practices enable your organization to 'do things differently'? If so, how?	Do these alternative forms of energy ownership and control enable your organization to have different goals or priorities from other organizations, e.g., prioritizing social or environmental goals over profit maximization?
		Have you experienced barriers/constraints concerning these goals or priorities?
	4. What kind of impact do you think these practices have on your members?	Have you observed any changes in social relationships, e.g., enhanced trust or cooperation?
		Have you observed any changes in attitudes or behaviour, e.g., pro-environmental behaviour?
	5. Do you see these practices as part of a broader political shift, i.e., towards a different kind of	Are you connected to any similarly democratic organizations (within or outside the energy sector)?

	democracy? If so, is your organization involved in building connections towards this shift?	Are you connected with local communities?
		What impedes these kind of connections?
	6. What do you see as enabling factors to expand these practices?	How important have supportive government-led programs been for your organization?
		How important are pre-existing factors within you community, e.g., people's knowledge, ability to participate, trust between community members.
		How important is the broader energy democracy movement to your practices, e.g., advocacy, academic literature?

Appendix C: Energy democracy: Reclaiming a unique agenda in energy transitions research

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Abstract

The intersection of energy transitions and equity is a rapidly expanding area of research and concern. Within this literature, *energy democracy* and *energy justice* have arisen as two equity-related concepts sharing both overlap and distinctions, at times leading to conceptual confusion and diverging recommendations on how to address their overlap. Given the importance that research adequately wrestles with the intersection of energy transitions and equity, it is critical that scholars do not inadvertently obscure the complexities inherent in this field of research. With this in mind, our perspective paper illustrates the uniqueness of these concepts, with particular focus on energy democracy.

While energy justice has arisen as a valuable academic framework for assessing critical energy issues, we differentiate energy democracy as both a critique of dominant approaches to energy transitions and the offering of an alternative vision involving the reconfiguration of social relations in energy systems. We argue that without understanding the broader struggles in which energy democracy is embedded, it may otherwise be difficult to understand why its distinctiveness matters. Our paper therefore situates energy democracy within broader struggles to prefigure a democratic economy. Further, we argue that critical engagement with these broader social movements and their associated literatures may position energy researchers to better wrestle with challenges facing energy democracy and energy transitions, including systemic power imbalances, Western biases in equity-related frameworks, and the structural barriers inherent in existing economic systems.

1 Introduction

As we transform our global energy systems and attempt to mitigate the climate crisis, our approach to energy transitions has the potential to alleviate, maintain and/or exacerbate existing societal inequities [1, 2]. Consequently, the intersection of energy transitions and equity has emerged as a rapidly expanding area of research and concern. Scholars are interrogating such issues as system-wide injustices from resource extraction to waste disposal [3, 4], obstacles associated with decolonizing energy [5, 6], and the inherent political nature of energy transitions [7, 8]. Through such investigations, research reveals that achieving the societal transformation required to address the climate crisis—without exacerbating or perpetuating inequities in an already increasingly unequal global society [9]—is deeply complex.

Within this evolving body of literature, *energy justice* and *energy democracy* have arisen as two equity-related concepts, potentially demarcating two subsections of the field. *Energy justice* primarily emerged as an academic concept where understandings of justice are applied to critical energy issues by interdisciplinary energy scholars [10, 11]. Through the application of energy justice frameworks, the concept has been seen as a useful tool for analyzing particular contexts and challenges [12]. For example, an energy justice framework has been employed to assess

international Sustainable Development Goals [13] and to develop indicators for assessing the justness of demand-side low-carbon innovations [14]. *Energy democracy*, by contrast, is commonly traced to community organizers, unions and communities of colour [15, 16, 17], where on-the-ground activists confronting injustices organized around the principle "no decisions about us without us" [18, p. 44]. Energy democracy today is thus seen—at least in part—as an extension of local struggles and a response to existing corporate-dominated ownership structures in energy systems [19]. Energy democracy as a concept has subsequently expanded in its use in academic literature, where it is frequently argued to be a 'slippery' or 'fuzzy' concept that is difficult to define [19]. Energy democracy has been conceptualized by some scholars as an emergent social movement [20, 7], where unjust ownership arrangements are reconfigured toward worker and community-based ownership [15, 20, 17]. In summary, while both concepts share common ideals, energy justice may be primarily understood as a theoretical framework for investigating injustices in energy systems, whereas energy democracy may be understood as a social movement and a collection of strategies to instantiate structural change in energy systems—i.e., create an example of change through practice.

Despite distinct conceptual origins and definitions, the areas of overlap between energy justice and energy democracy have resulted in diverging recommendations for how to address their overlap in the literature. First, Droubi et al. (2022) argue that confusion between the concepts results in a "language war" between them that affects the ability of energy studies to address the challenges of transitions [21, p. 2]. These authors present a critical review of energy democracy, arguing that the concept falls short of energy justice due to its lack of conceptual clarity and a false assumption that democratic principles sufficiently deliver justice. They argue that "democratic processes have brought Western countries, and countries that adopt the Western model of democracy, to the situation of *inequality* and *injustice* that they experience. How exactly could further reproduction of these processes on smaller scale (energy) deliver more justice?" [21, p. 2]. Because of these perceived limitations, the authors argue that energy democracy literature should be subsumed under energy justice, thereby ending the language war. Second, Osička et al. (2023) respond to these authors to argue that although the concepts share a close family resemblance in both normative pedigree and empirical coverage, they address distinct terrains [22]. These authors argue that while both concepts have limitations, energy democracy possesses unique strengths, including the mobilization of distinct audiences. Rather than subsuming one concept under another, they therefore argue that the two concepts would be better understood as complementary, where critical engagement between them would benefit the field of energy transitions.

Given the importance that research adequately wrestles with the intersection of energy transitions and equity, it is critical that scholars do not inadvertently obscure the complexities inherent in this field of research. Further, given the opportunity for energy democracy, in practice, to address systemic injustices through the reconfiguration of energy ownership and control, it is important that energy democracy, in literature, is conceptualized in a way that reflects this potential. With this in mind, our perspective is in agreement with Osička et al. (2023) [22] that despite areas of overlap, energy justice and energy democracy are best understood as complementary but distinct concepts. Our aim is to further demonstrate the uniqueness of energy democracy—that is, to illuminate its separateness from energy justice. Specifically, while Osička et al. (2023) [22] explain overlap and distinctions in their associated literatures, what enables energy democracy to appeal to a unique audience, including that of potentially transformative social movements that are skeptical of the dominant approaches to transitions, remains underdeveloped. Crucially, without

understanding the linkages to the broader social movements that energy democracy is embedded and originates in, it may be difficult for energy researchers to understand what makes energy democracy's distinctiveness so important.

To address this gap, our paper situates energy democracy within the broader struggles for political and economic transformation—specifically, prefigurative social movements, of which energy democracy is an example [23, 24, 25]. Importantly, the emergence of the energy democracy movement has coincided with a dramatic upswing of prefigurative social movements, which refer to social movements that embody the principles and values they advocate for in their present actions and organizational structures—these movements aim to 'prefigure' or instantiate structural change in and through practice [26, 27, 28]. We begin with a discussion of both energy democracy and energy justice, where we differentiate energy democracy as both a critique of dominant approaches to energy transitions and the offering of an alternative vision forward involving the reconfiguration of our social relations. We then explore the literatures associated with the broader social movements in which energy democracy is embedded. Namely, by understanding broader struggles to prefigure a democratic economy, energy democracy's appeal to broader audiences can be more meaningfully understood. Further, by better conceptualizing these connections, we can consider the appropriate theoretical and methodological approaches for investigating energy democracy.

2 Differentiating 'Energy Democracy'

Energy democracy literature is composed of a diverse array of voices and internal difference [29], which has likely contributed to its common label as 'fuzzy' and conceptually unclear. Scholars, for example, note varied legal proposals [30], conceptual fragmentation [31], and sometimes diverging ideas about what is 'democratic' about energy democracy [19]. This section does not aim to oversimplify or flatten these complexities. Rather, the aim is to illuminate the core contributions and ideas of energy democracy that may be obscured in academic discussion and debates. Importantly, these core ideas share commonalities with broader struggles for political and economic transformation—specifically, with broader prefigurative social movements striving for a democratized economy—and which may help to explain the appeal energy democracy has maintained with audiences that are skeptical of the dominant approaches to energy transitions.

2.1 Energy democracy: a critique and alternative vision forward

Although energy systems are recognized as sociotechnical systems, i.e., energy infrastructure that co-evolves with social-economic systems [32], and transitions research increasingly considers the *political* nature of energy transitions [8], there has nonetheless been reluctance to engage with critiques of capitalism, i.e., the "dominant organizing system of political and economic life in modern societies" [33, p. 241]. The starting point for energy democracy is thus potentially unique in this field, as researchers and practitioners commonly emphasize the broader political and economic systems within which energy systems are embedded [15, 34]. Accordingly, energy democracy aims to disrupt the existing patterns of ownership in energy systems, which are currently entrenched in state and corporate power, by "propos[ing] an often concrete set of suggestions for how bottom-up participation and ownership can be condensed into organizational forms" [35, p. 158]. In other words, energy democracy is situated in 'system-change' discourses pertaining to the climate crisis that are skeptical of the dominant approaches to transitions [36].

Proponents of energy democracy generally resist a static and narrow definition, arguing that in doing so risks flattening the richness and differences across localized struggles [37]. Its common features, however, involve the reconfiguration of *ownership* and *control* of energy systems, where this restructuring is understood to be a strategy for transformation [38, 19, 39, 40]. Energy democracy therefore presents an alternative vision forward to reconfigure social relations in energy systems. At a basic level, social relations merely refer to how people are related (i.e., connected) to each other—however, while relationships can be voluntary, the social relations that define our existing economic system are *in*voluntary (i.e., people must enter into often inequitable social relationships to survive and receive basic necessities) and are based on who owns and controls the resources, land, and materials that produce goods and services [41]. Thus, by reconfiguring social relations in energy systems, energy democracy commonly involves activities that are inherently non-capitalist, i.e., their core activities involve non-capitalist social relations, and may have the potential to contribute to broader efforts to disrupt the ownership arrangements of our economic system.

First, concerning *ownership,* energy democracy proponents argue that renewable energy and many associated innovations—e.g., distributed energy resources, smart grid technology, micro grids, and peer-to-peer trading [42]—are desirable not only for their potential to reduce greenhouse gas emissions. Rather, emerging forms of collective ownership also have the potential to reconfigure social relations by shifting ownership to workers and communities [43]. These forms of collective ownership are distinguishing features of energy democracy [40] and include, for example, collective prosumerism, community ownership, and cooperatives. While energy democracy is most commonly associated with local forms of ownership, some scholars argue collective ownership should not strictly be focused on the local level. Becker & Naumann (2017), for example, explains how establishing sovereignty may pertain to the state, e.g., progressive governments in South America who combine the idea of energy sovereignty with post-extractivist development models [44]. Visions for state or community-based ownership are contested, and largely hinge on concerns about state disengagement from social services and the level of democratic control [e.g., 45, 46]. Second, concerning *control*, energy democracy proponents advocate for socially controlled energy systems [19]. This shift in energy governance is based on the recognition that the natural endowments that compose energy should not be overexploited or exclusively controlled; rather, the organizations involved in energy production should operate democratically in support of the commons [47]. Energy democracy involves an energy-as-commons approach that sees energy as a public good before a commodity [7], thus challenging a new social vision beyond the dominant capitalist system [48].

These possibilities for reconfiguring ownership and control follow in the footsteps of longer running scholarship that emphasizes how technological choices are also political choices—it is this dynamic that explains why renewable technologies are connected to politically-driven social movements like energy democracy. Lovins (1979), for example, argued that due to their small scale, technical simplicity, and geographic spatiality, renewable energy systems are structurally suited toward more participatory and less coercive governance structures. This is contrasted with fossil fuel and nuclear technologies that necessitate massive investments in centralized ownership of infrastructure, thereby tending toward strongly interventionist central control, concentration of political and economic power, and the requirement of elitist technocracy "whose exercise erodes the legitimacy of democratic government" (p. 148) [49]. Ultimately, by socializing the ownership

and control of energy, energy democracy seeks more than the implementation of equitable procedures or outcomes for energy systems; rather, energy democracy attempts to capture the political possibilities that arise from renewable technologies to structurally transform whole energy systems [48, 19]. Importantly, while equitable procedures and outcomes are integral to energy democracy, e.g., empowering workers and communities to have a say in decision-making [50], its uniqueness instead pertains to the potential for structural transformation.

As a concept in energy transitions research, energy democracy has allowed space for the integration of 'system-change' discourses that recognize that the structural drivers of the climate crisis are inseparable from other economic and political crises of our time. These crises include unprecedented levels of inequality [51], asymmetric political power between corporations and civil society [52], and (likely related to these trends) declining trust in our existing democratic institutions as well as in the actors and stakeholders associated with these institutions [53, 54]. Importantly, such discourses assert that the dominant political approaches to addressing these challenges are "incapable of getting to the root of the problems we face as a society, problems that are systemic in nature" [38, p. 3]. That is, energy democracy scholarship has emphasized that consideration of our economic system deserves heightened attention [7], as conventional market solutions are unlikely to bring about the large-scale societal transformations we require [55]. This skepticism is related not only to the substantial lobbying efforts of incumbent energy actors aimed at maintaining the status quo [56], but also that capitalist societies are dependent on economic growth, and therefore the central role of the state is to advance the interests of capital—i.e., the profit-driven interests of corporate owners of energy systems—rather than the interests of communities [57]. More specifically, the endless economic growth imperative of capitalism has been driven by the massive energy density and intensity of fossil fuels (including coal, oil, and natural gas), which enable more economic output from each unit of energy input [44, 24]. Thus, while fossil fuels may appear to be just another staple resource, their lack of substitutability compared to other resources (e.g., salmon or wheat) means that our economy is uniquely dependent on fossil fuels [58]. It is therefore not just that achieving energy democracy for whole energy systems requires broader transformation of our economy [59, 60]; it is also that transforming social relations in energy systems is a core component in these broader struggles. In other words, given both the role fossil fuels have played in the emergence and reproduction of capitalism, and the increasing skepticism that our economic system is capable of addressing the interrelated crises we face, transforming social relations in energy systems may be understood as a particularly challenging but nonetheless crucial component of anti-capitalist struggle.

2.2 Energy Justice: an analytical framework for assessing justice

In the context of immense equity-related challenges throughout whole energy systems—for example, troubling rates of energy poverty[9], lack of access to electricity globally [63], and inequitable distribution of pollution and degradation [64]—researchers rightfully recognize the need for an academic framework capable of investigating these interrelated challenges through an interdisciplinary lens [65]. To that end, the 'energy justice' concept was developed to be applied to critical energy issues. The concept involves various frameworks, such as McCauley et al.'s (2013) three tenets of justice, distributive justice, recognition justice, and procedural justice [66]; and Sovacool and Dworkin's (2015) eight principles, availability, affordability, due process, good

[9] Defined as a lack of necessary and adequate home energy services for meeting social and material needs [61, 62].

governance, sustainability, intra-generational equity, inter-generational equity, and responsibility [12]. Since these initial publications, frameworks have evolved through engagement with postcolonial and critical theory to include, for example, cosmopolitan justice [2], restorative justice [11], resistance and intersectionality [67]. Now being characterized as the leading interdisciplinary energy research topic, energy justice is argued to have practical applications such as potential for implementation in national courts [65], and in policymaking [68]. It is this potential to assess and evaluate energy-related decisions—which have historically been neglectful of equity concerns—through a justice-oriented lens that makes energy justice an important concept for energy researchers.

Given this breadth and conceptual uptake, some energy justice scholars have criticized energy democracy for muddying the waters in transitions research, in particular, due to the confusion between the two terms, energy democracy's limited translation into policymaking, and its inability to build interdisciplinary collaboration [21]. Energy justice, however, may be distinguished from energy democracy in a few key ways. As a conceptual framework, energy justice has proven to be highly adaptable for use in analytical investigations (i.e., through the aforementioned tenets and principles of justice), whereas energy democracy's position as an evolving social movement that is resistant to static definitions may present challenges for its usage as an analytical framework. Further, potentially due to being a "top-down" methodology with a "non-activist past" [10, p. 119], energy justice tends to focus on 'tailpipe' problems, e.g., accessibility and affordability, rather than the structural and systemic forces that produce problems in the first place [69]. That is, while energy justice is compatible with and commonly applied to existing institutions and to challenges within our economic system [65, 68], energy democracy is motivated by the related but distinct aim to transform and restructure that system [43, 15]. Energy democracy may therefore help to build alliances with people who are skeptical of, or have been historically excluded from, traditional policy approaches [15; e.g., 5, 70]. In other words, while energy justice can successfully facilitate interdisciplinary collaboration within academic research, energy democracy may bridge connections between transition research and social movements that are skeptical of the dominant approaches to transitions, i.e., approaches that leave our existing social relations in place. Importantly, these connections—which are explored in the following section—are crucial if we wish to challenge existing structures of power and avoid reactionary responses to local challenges [71].

3 'Democracy' in Critical Theory

"If a society cannot democratically share its wealth, power, respect and resources, it is not going to be a real democracy" [Cornel West, as cited by 72]

When we think of democracy, and of politics more broadly, we are often limited in thinking about electoral politics and the rules, norms and institutions of liberal capitalist democracies. This constrained understanding of our democratic life, however, has been characterized as myopic and distorted, as capitalism is increasingly argued to be incompatible with democracy [41, 73]. Given the pervasiveness of our constrained democratic imaginary, however, it is understandable that some energy transitions scholars have been reluctant to use democracy as a framework for addressing societal inequities [e.g., 21]. The following sections look outside the field of energy transitions to highlight scholars and activists who emphasize the contradictions pertaining to democracy in our political and economic systems. Notably, this literature underscores movements

aiming to prefigure a democratic economy. Importantly, understanding energy democracy as a component of these broader struggles is crucial for both distinguishing energy democracy and energy justice as distinct, as well as for more meaningfully investigating energy democracy's transformative potential.

3.1 A critique of our 'constrained' democracy

Within democratic theory, a central conundrum has long involved the matter of equality—that is, if democracy implies equality among participants at the point of decision-making (i.e., one person, one vote), how can we understand the coexistence of political equality with existing material inequality [74]? It is precisely the deepening of inequality in Western liberal capitalist democracies that leads some scholars to argue democracy does not necessarily deliver justice [e.g., 21]. The broader struggles and associated literatures energy democracy is embedded in, however, largely agrees that our existing institutions are insufficient for delivering justice. Importantly, they emphasize that despite the common conflation of 'democracy' with liberal capitalist democracy, these terms are not synonymous [75]. Rather, it is precisely the constraints of Western liberalism upon democracy that have limited its ability to challenge material inequality [75, 76].

Many critical theorists[10] have long noted that ideological justifications for Western 'democratic' institutions were largely developed by critics of democracy [74, 77]. Efforts to repress democracy followed a belief from liberal political theorists that a move towards equality, and thus democracy, was inevitable. This "fated" inevitability is explained by Alexis de Tocqueville in *Democracy in America* (1835), who argued that a progressive leveling out of the classes had occurred since the 11th century. Tocqueville writes, "the noble has gone down on the social ladder, and the commoner has gone up; the one descends as the other rises. Every half-century brings them nearer to each other, and they will soon meet" [78, p. 30). Subsequent scholar J. S. Mill, who was heavily influenced by Tocqueville, accepted the inevitability of democracy but was concerned with its two "great evils": first, the danger of "a low grade of intelligence in the representative body", and second, danger in "class legislation on the part of the numerical majority" [79, p. 144]. Mill, like other liberal political theorists of the time, was concerned that an 'uncontrolled democracy' would bring along a representative body prioritizing the interests of the working class, and thus undermine the economy of the nation [80].

The importance of these democratic criticisms is not merely theoretical, rather, their critiques were important because they contributed to constitutions "constructed against democracy" [77, p. 105]. That is, given its 'perceived inevitability', democracy was constituted rather than opposed—given forms, structures and boundaries through constitutions that "regulate the amount of democratic politics that is let in" [77, p. 102]. While early democracies arose in liberal capitalist contexts, 'democratic' institutions were specifically designed to suppress any real challenge to the competitive market society [75]. "It is not simply that democracy came later," C. B. MacPherson argues, it is also that "democracy in these societies was demanded, and was admitted, on competitive liberal ground" [75, p. 14]. In practice, liberal democratic societies have constructed a boundary between the 'public' and 'private' sphere [81, 73]. The *public* sphere—the sphere that is deemed 'political'—includes laws, legislation, and some civil structures, where those affected by decisions are invited to participate [73]; while the *private* sphere—a depoliticized economy—

[10] Critical theory refers to a philosophical approach that reveals and critiques societal power structures and inequalities. It emerged from the Frankfort school in the early 20th century, and now encompasses a variety of Marxist, post-Marxist, feminist, and postcolonial critiques [24].

is mediated by the market where "individuals are free to do what they want without involving the democratic participation of those affected by their actions" [73, p. 17]. It is precisely this understanding of 'the political' as a particular sphere quarantined from 'the economic' that characterizes capitalism [82]. In other words, in liberal capitalist societies we have achieved—however inadequately—*political* democracy, but not *economic* democracy [83].

The impact of these democratic constraints is far-reaching. Political democracy, being confined to the 'public' sphere where it is unlikely to wield real power [81], is therefore rendered "a mere formality without substance" [72, p. 111]. Politics is instead reduced to the ritual of elections, where there is an appearance of different opinions, but the overall paradigm is the same [76], and further, where citizens have little voice in decisions that may most impact their lives [84]. For example, these decisions include how profits are distributed within economic enterprises [72] and how—increasingly monopolistic—corporations set prices on goods that are essential for human flourishing [85]. Arguably related to these constraints, we are currently living at a time of massive and increasing inequality [86, 9]. Perhaps unsurprisingly, there is a growing disillusionment with liberal democratic politics [87, 88] that not only contributes to disengagement, apathy and nihilism [82], it may contribute to the ongoing rise of demagogic right-wing populism [89]. People who have long been disenfranchised under our existing political systems risk becoming seduced by populist saviours who promise to give power back to 'the people' [89]. Many on the political left, by contrast, while similarly disillusioned, envision political movement, involving deepened pluralistic and egalitarian sharing of power in areas of society where democracy has been restricted [90]. Crucially, it is only in the context of these critiques that 'energy democracy' can be meaningfully understood.

3.2 A vision forward through democratization

The rise of energy democracy coincides with the dramatic upswing of social movements since the early 2000s that incorporate the language of radical democracy to critique our political and economic systems. 'Radical democracy' is a political theory and practice that emphasizes the deepening of democratic structures, including an integration of politics and economics that welcomes democratic practices into the economic realm [91, 92]. It thus specifically challenges the separation between the 'public' and 'private' spheres that characterizes liberal capitalist democracy. At the same time, these emerging social movements also experiment, in practice, with desired future social relations within their activities and practices [26, 93, 28]. Importantly, as many anti-capitalist scholars and organizers grew disillusioned with 19th century communist solutions for achieving egalitarian societies [73], it has been radically democratic strategies that have characterized many contemporary 'left' social movements [94, 95, 96]. In these social movements, which are increasingly referred to as *'prefigurative'* social movements, individuals or groups embody the principles and values they advocate for in their present actions and organizational structures [28, 97], i.e., 'be the change you wish to see' [98]. Importantly, prefiguration involves introducing democratic and non-capitalist economic activities into the ecosystem of capitalism, "nurturing their development by protecting their niches and figuring out ways of expanding their habits", thereby—at least in theory—helping to erode capitalism [73, p. 61]. In other words, prefigurative social movements construct alternative social relations at the local level in an effort to instantiate or 'prefigure' structural transformation of the economy. Of relevance to this paper, the energy democracy movement, through its aim to reconfigure social relations within energy systems, is an example of a prefigurative social movement [23, 25].

In practice, prefigurative activities may include, for example, worker and consumer co-ops (noted to be the most 'quintessential' prefigurative activity), worker factory councils, civic environmental councils, ecovillages or transition towns, and a wide variety of mutual aid organizing strategies [99]. Generally, the institutional focus is small, local, collective organs of popular control that seek to democratize and reinvigorate revolutionary politics [100]. While not necessarily being explicitly *anti*-capitalist, these institutional forms exhibit social relations that are inherently *non*-capitalist. For example, worker cooperatives and factory councils—rather than exhibiting social relations between workers and capitalists—operate democratically where workers collectively own the means of production in their own workplace [101]. Similarly, civic environmental councils and ecovillages prioritize local and community-driven priorities, rather than being profit-driven, and often involve communal decision-making [102]. Further, social movements such as the Occupy Movement, which was sparked largely by disillusionment in the wake of the 2008 financial crisis, incorporated consensus-based participatory democracy that was inclusive and anti-hierarchal [103]. While Occupy was commonly misrepresented in media and academia as lacking a coherent ideology or message, advocates have argued Occupy is "about creating new forms of organization. It is not lacking in ideology. Those new forms of organization *are* its ideology" [104, as cited by 27, p. 31]. The limited scholarly attention prefigurative activities receive has been considered by scholars such as Gibson-Graham [105, 106], who highlight how presently existing societies include more varied practices than is sometimes considered in hegemonic framings of capitalism that dominate academic investigations. While their critique, as well as prefigurative scholarship more broadly, is contested—i.e., whether the constraints of capitalism are indeed too all-encompassing for local and collective action to present a meaningful challenge—these authors encourage us to focus on the here and now as the place and time of transformative action, rather than waiting for some distant revolution.

By intentionally establishing alternative organizational structures, prefigurative activities create tangible examples of the social relations and values of a more just and equitable society, serving as both a critique of existing oppressive structures and a blueprint for achieving a new system for organizing our economy [107, 97]. This new system is often referred to as 'economic democracy', an alternative to capitalism wherein people have formal decision-making power in their core economic associations [95, 74]. Prefigurative activities may be understood as the 'building blocks' of economic democracy [73, 99]. Certainly, clear connections with socialism can be drawn. The Marxist tradition has long criticized 'bourgeois democracy' that excludes class[11] structures from democratic decision-making through the boundary between the public and private spheres [100]. Marxism's explicit argument is that class must be an object of democratic debate; this is what differentiates socialist democracy from its bourgeois form [108, p. 114-115]. However, proponents of prefigurative social movements largely acknowledge the failures of actually existing communist states in achieving egalitarian and democratic societies [100, 70, 71]. It is specifically this disillusionment that sparked rising popularity of prefigurative practices, where scholars and activists have emphasized the importance of building a vision that recaptures ideological ground [92]. These emerging struggles have therefore been argued by some to have more in common with anarchism than Marxism [104], where anarchists such as Emma Goldman long argued that the goals of a movement must be embodied in its current practice [109]. Given how these practices challenge simplistic framings of 'left' and 'right', i.e., big or small government, aligning them

[11] Importantly, class here refers not to income or wealth, but to the "objective material relationship to production" [60, p. 20].

within conventional ideological framings may not be easily achieved or even desirable. On the contrary, some have argued they may have the potential to appeal to broader audiences and help establish a mass movement, given that so many people across the political spectrum are similarly unsatisfied with our existing political and economic systems [95].

Lastly, it should be emphasized that despite the common conflation between democracy and Western ideals, there are abundant examples of on-the-ground democratic social movements around the world [110]. While such movements include diverse and sometimes imperfect practices, they highlight how democratic principles are not limited to Western contexts. Examples include village gram sabhas (assembly of all residents) in India, where regular meetings are made by consensus and decisions regarding the use of land or resources within its territorial jurisdiction can only take place with the sabha's consent [111]; the Zapatistas uprising in Chiapas, which emerged in response to colonial oppression and privatization, and has advanced conceptions of self-governance rooted in traditions [112, 110]; the Rojava revolution emerging in the context of the Syrian war, where the introduction of democratic activities in different spheres of life are understood as consciousness-raising efforts against oppression that open new possibilities for 'the political' beyond rituals like voting [113]; and the commune movement in Venezuela, where over 47,000 local councils of direct democratic self-governance tackle local community issues such as education and housing, and is driven by local people rejecting neoliberalism [114, 115]. Despite this abundance of democratic practices globally, however, efforts to decolonize democracy are complex given that the 'democracy' concept has been used as a tool for justifying neoliberal globalization and colonization [116]. Conway & Singh (2011) argue that Western capitalism has complicated global justice scholars' ability to theorize democracy as they fail to realize the Western capitalist underpinning of their knowledge, thus globally emerging discourses and practices of radical democracy tends to be understood as more of an eclectic ensemble of struggles than a coherent theoretical project [110].

4 Discussion

Although conventional narratives surrounding energy transitions are that energy systems can be transformed while sustaining existing political and economic relations [29], energy democracy researchers challenge the apolitical narratives of energy transitions with (1) a critique of dominant approaches that maintain existing social relations and (2) the offering of an alternative vision for structural change. While recent scholarship [e.g., 22] rightfully explains energy democracy's conceptual distinctiveness in the field of energy transitions, its appeal to audiences that are skeptical of the dominant approaches for transitions may remain somewhat obscured. Energy democracy, in literature, has been mentioned somewhat in passing as a component of economic democracy [e.g., 15, 24] and more recently in the context of prefigurative social movements [25]. Our paper aims to establish these connections more explicitly because it is our perspective that only through such explicit understanding, can energy democracy be meaningfully understood.

While our perspective paper highlights the distinctiveness of energy democracy, scholars rightfully note the limitations in its theory and practice. For example, energy democracy proponents sometimes overemphasize localist solutions for achieving just outcomes, which may neglect inequities within local contexts [44, 117], and it largely remains unanswered how collective ownership and control of whole energy systems will be achieved in the context of deeply entrenched and powerful incumbent actors [118, 36]. However, rather than responding to such limitations by discarding or dismissing the concept, we argue that energy democracy research may

be strengthened by better understanding its embeddedness in the social movements outlined in Section 3 of this paper, and by critically engaging with their associated literatures through relevant research approaches:

1. Energy democracy scholarship can build on the lessons learned from similar prefigurative social movements outside of the energy sector. Although literature pertaining to prefigurative social movements has arisen alongside energy democracy literature, there has been limited engagement between them. Prefigurative scholarship, however, has wrestled with emerging questions in energy democracy scholarship, such as how localized struggles may instantiate transformation in the context of entrenched power—for example, by building alternative structures for social power, i.e., dual power [100, 73]. Scholars have also explored how prefigurative social movements may wrestle with intersectionality and inclusivity concerns within organizational practices [119, 120]. Thus, emerging scholarship related to prefigurative social movements, including both optimistic [e.g., 121, 27] and skeptical accounts [e.g., 122, 123, 124] may help to inform these discussions in energy studies.

2. While energy transitions scholarship has cast doubt as to whether energy democracy is relevant to non-Western contexts [e.g., 21], global/non-Western examples of democratic social movements not only challenge this idea, they also show how Western scholarship can learn from global practices. To address this gap and other potentially harmful underlying assumptions, energy democracy scholarship may benefit from exploring these connections through critical research approaches. For example, participatory action research is a scholar-activist research approach that emerged in the context of anti-colonial movements in the Global South and involves a solutions-oriented approach that prioritizes "experiential knowledge" for tackling problems related to inequality, "harmful social systems" and for conceptualizing alternatives [125]. Critical race theory approaches involve "activist scholars" and began in the mid-1970s, where "scholars, lawyers, and activists ... expressed disquiet that the headways made during the civil rights era had begun to stall and, in some instances, regress" [126, p. 255]. It challenges mainstream research approaches that reinforce oppression, and it critiques methodological neutrality where all persons are treated alike, regardless of their differing initial positions and histories [126]. Various Indigenous research approaches also contrast colonial-settler research where insights are extracted from Indigenous communities while offering no services to research participants; rather, these approaches center Indigenous perspectives, beliefs and values, and challenge westernized assumptions [127]. Thus, engagement between energy democracy and these critical lenses may help deconstruct Western assumptions in our understanding and application of the energy democracy concept.

3. Perhaps most importantly, 'energy democracy,' as a political goal, will not be achieved through a siloed struggle in the energy space alone. As has been argued by energy democracy scholars, energy democracy is "not merely a matter of instituting more meaningful processes of community engagement in an inherently undemocratic system" [46, p. 27]. Rather, it requires the ownership and control of resources and the mechanisms of production more broadly [59]. Thus, by understanding and investigating how energy democracy is a component of and may contribute to broader struggles to democratize the economy, we are far more likely to actualize these goals.

5 Conclusion

As the field of energy transitions continues to wrestle with the intersection of energy transitions and equity, concepts like energy justice and energy democracy offer scholars important lenses through which to consider transitions. Energy justice provides an important analytical tool for investigating these interrelated challenges through an interdisciplinary lens. At the same time, however, the necessity of addressing injustices in our current system ought not lead us to abandon imagining something new. To that end, energy democracy offers both a critique of the dominant approaches to transitions and an alternative vision forward. Given its uniqueness in the field, we believe that energy justice and energy democracy are best understood as distinct and complementary concepts, where meaningful engagement between them would strengthen scholarship in both.

Our paper contributes to these ongoing debates in transitions scholarship by encouraging researchers to look outside the sometimes-siloed field of energy transitions to the broader social movements and associated literatures that energy democracy is embedded in. What enables energy democracy to maintain its appeal with unique audiences has been somewhat underdeveloped in these discussions, and without understanding these linkages, it may be difficult to understand what makes energy democracy's distinctiveness so important and valuable. Further still, by critically engaging with the social movements energy democracy is embedded in, as well as their associated literatures, we can help address gaps in energy democracy scholarship and potentially contribute more meaningfully to these interconnected struggles.

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