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# Editorial: A Research Agenda for Energy Democracy

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## Editorial on the Research Topic

## Energy Democracy

Understanding the full spectrum of research, development, and deployment of energy systems remains one of the most profound sustainability challenges facing society. This is compounded by the need to address climate change both from the perspective of climate mitigation to reduce the rate of change, as well as climate adaption as we seek to make our energy systems more resilient to potential climate-related disasters (Feldpausch-Parker et al., 2017). With energy system change at the crux of complex policy debates that are especially acute in nominally democratic regimes comes an unprecedented opportunity to experiment with new forms of participation and governance. The confluence of social and political upheaval with availability of new energy technologies throughout the world enables unparalleled possibilities for innovation. Although these possibilities are global, nowhere are energy system changes more clearly apparent than in the western democracies of North America and the European Union (Stephens et al., 2015). In response to this upheaval, scholars of science, technology and society (STS), communication, and interdisciplinary energy studies have an opportunity to develop new research pathways for discovering how and when energy system change draws upon democratic principles and how its discourses may, in turn, contribute to a deeper understanding of participatory democracy. Research on energy democracy seeks to (1) understand, critique, and theorize energy system transition from a lens of democratic engagement; (2) articulate energy democracy as a "transdisciplinary network" of engaged research that blends scholarly inquiry with practical action toward making a difference (Sprain et al., 2010); and (3) advocate for research-informed models and practices that contribute to making energy transitions and decisions as democratic as possible within a nexus of global patterns of energy extraction, production, and consumption.

This Research Topic grew from our collective research interests in energy communication (Endres et al., 2016; Cozen et al., 2017), which engages with questions about energy systems, the climate change/energy nexus, social movement, and public participation in energy decision-making. It emerged from our desire to produce engaged research that contributes to ameliorating and adapting to what we see as a crisis that can no longer be ignored: climate change. We seek to compose an engaged research agenda that might contribute to both democratizing energy and addressing the existential climate crisis. With these impulses guiding our collaboration, we hosted an Energy Democracy Symposium at the University of Utah in July 2017. That symposium formalized our engagement with developing a research agenda for energy democracy. The papers in this special topic, some of which were presented at the Energy Democracy Symposium, offer pathways to continue to expand and proliferate research in this area. Our intent is not to take ownership over or predetermine a particular research program. Rather, we hope this Research Topic will highlight ongoing research that falls within an energy democracy frame, catalyze an ongoing scholarly conversation about energy democracy, invite new ideas and perspectives into the conversation, and, ultimately, produce further research that enables scholars, advocates, activists, and policy-makers to contribute to the inevitable energy transition.

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In this introductory essay, we offer a working definition of *energy democracy*, or perhaps more appropriately *energy democracies* (see Chilvers and Pallett). Our definition not only draws from activist efforts to achieve energy democracy, but also reflects a synthesis of ongoing research that might fall under the moniker of energy democracy. Then, we lay out an initial conceptual framework for thinking about energy democracy, rooted in our own research interests, themes we saw emerging in scholarship, and the topics that came up during and after the Energy Democracy Symposium. This framework, which we offer in the hope that it will be challenged, expanded, and strengthened through the collective efforts of scholars and practitioners, positions *participation*, *justice*, and *power* as key components of energy democracy. After unpacking this framework, we highlight the papers included in this Research Topic. Finally, we close with reflections on future directions for a research program in energy democracy.

## WHAT IS ENERGY DEMOCRACY?

Energy Democracy is fundamentally rooted in localized struggles and activism that seek to democratize energy systems, including extraction, production, consumption, and decision making. Indeed, we first encountered the term in the communication of activist groups, energy practitioners, and other groups outside of academia. For example, Angel (2016) wrote in *Towards Energy Democracy: Discussions and Outcomes from an International Workshop*:

> 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 reimagining 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).

The term, along with emerging efforts to create an energy democracy agenda, sparked our curiosity and desire to understand energy democracy as both a movement and a possible research program. For us, the term represents an emergent social movement that re-imagines energy consumers as prosumers, or innovators, designers, and analysts who are involved in decisions at every stage, from energy production through consumption (see: Giancatarino, 2012; Stephens et al., 2015). As Angel (2016) notes, it "is not a future utopia to be won but, rather, is an ongoing series of multiple struggles over who owns and controls energy and how, where and for whom energy is produced and consumed" (p. 4). Building on this, Sweeny (2014) declares that energy democracy entails

> (1) resisting the agenda of large energy corporations, (2) reclaiming to the public sphere parts of the energy economy that have been privatized or marketized, and (3) restructuring the global energy system in order to massively scale up renewable and low-carbon energy, aggressively implement energy conservation, ensure job creation and local wealth creation, and assert greater community and democratic control over the energy sector (p. 218).

Energy democracy, then, cannot be separated from its roots in activism and enactment through a range of localized struggles. Chilvers and Pallett, in their article in this Research Topic, advocate for a terministic shift from energy democracy to energy democracies, eschewing a singular definition that would flatten the richness, complexity, and differences in energy democracies.

While energy democracy movements are increasingly asserting their role in energy decision-making, interdisciplinary energy systems scholarship is just beginning to substantively engage with this empirical phenomenon that has important consequences for energy policy, participatory democracy, and public participation in energy decision-making. Indeed, the term and the ideal behind it are seldom addressed in extant scholarship (Reinig and Sprain, 2016) (Although this is changing as we see more uptake of the concept in scholarship since 2016 when we prepared for the Energy Democracy Symposium and observed a palpable lack of research engagement with the emergent concept). Energy democracy is one research pathway that brings together scholarship in democratic theory, communication, interdisciplinary energy studies, rhetoric of science, and STS research. A sustained program of research in energy democracy could illuminate its empirical, theoretical, and practical underpinnings and suggest future possibilities. Similar to the ways environmental justice is both a movement and an area of scholarship with reciprocal relationships, developing research on energy democracy requires elucidating its normative commitments, an empirical research agenda, and practices and processes to support or constrain energy system transitions. This engaged research program would seek to not only understand and theorize energy democracy, but also develop research-informed pathways for mutual learning between energy practitioners, scholars, and activists (Sismondo, 2008). To be clear, we do not seek to influence the agenda of energy democracy movements. Rather, we seek to think through energy democracy as a potential Research Topic with its own agenda. This is not to say that the two—movement and research agenda—need be disconnected. Indeed, we envision the development of an energy democracy research agenda as responsive, provocative, and in conversation with energy democracy activism.

As noted above, this collection emerged from the Energy Democracy Symposium hosted at the University of Utah (USA) in July 2017. The symposium brought together a transdisciplinary group of scholars, practitioners, and interested citizenry to discuss social dimensions of sustainable energy system transitions [1]. A total of 25 scholars and energy practitioners participated, with the first day of the 2-day symposium open to the public. The goals were to: (1) solidify the role of communication and STS in energy

[1]The symposium, sponsored by the National Science Foundation, National Communication Association, University of Utah's Communication Institute and College of Humanities, and University of Colorado's BoulderTalks, was held in the Salt Lake City Public Library and at the University of Utah.

democracy research; (2) further develop the emerging subfield of energy communication through its interconnection with energy democracy; (3) encourage interdisciplinary engagement with energy democracy across social sciences and humanities scholars interested in energy transitions; and (4) begin a conversation about developing a research program for energy democracy.

## CREATING A CONCEPTUAL FRAMEWORK FOR ENERGY DEMOCRACY

Conceptual frameworks for energy transition often inadequately account for political dynamics, public engagement, and grassroots civil society, therefore, failing to translate ideas into effective governance strategies (Grin et al., 2010; Lawhon and Murphy, 2012; Chilvers and Longhurst, 2016). To increase its policy relevance, some energy systems researchers have highlighted social context as a crucial element (Einsiedel et al., 2013). For example, Laird (2013) notes, "collective analyses show the importance of broadening the concept of an energy transition or, failing that, finding a new vocabulary for these changes that brings their social and political features to the fore" (p. 155). Building from this effort, our focus on energy democracy moves from viewing the sociopolitical elements as context to seeing them as key starting points for investigation of sustainable energy transitions. In doing so, scientific and technical knowledge is not ignored, but is one part of a complex social, technical, political, cultural, and ecological system that recognizes that technical knowledge or feasibility alone cannot guarantee an energy system transition. This move foregrounds studying and theorizing a broad range of actors, democratic values, democratic functions, and energy governance sites that are inextricably linked with energy transition across a variety of energy types.

In examining energy systems literature, reflecting on our own research programs, and thinking through the abstracts we received for the Energy Democracy Symposium, we noticed three recurring and intersecting concepts, which we used to develop a conceptual framework for research in energy democracy. We contend that energy democracy works within the intersection of justice, participation, and power. In the spirit of considering the possibility of multiple energy democracies, we do not claim one ideal configuration of these components nor that these are the only three components, but instead argue that this framework provides a heuristic, enabling examination of theoretical models, empirical examples of ongoing struggles over energy, and practical recommendations for communities engaged in promoting energy democracy. As a social movement, energy democracy re-imagines energy consumers as prosumers. As a research agenda, energy democracy begins at the nexus of justice, participation, and power. This nexus provides researchers with a checkpoint for examining how energy democracy is a process of group decision making characterized by equity. The concept of justice should highlight the importance of equity; the concept of participation should highlight the importance of group decision making; and the concept of power should highlight the importance of recognizing extant structures of power and possibilities for resistance. While there is obvious overlap between these three components, we separate them out for the purpose of both highlighting the distinctive properties of each and understanding what happens with different configurations of power, justice, and participation in energy decision making. In practice, energy democracies perform a complex intermingling of these interrelated components that enable and constrain possibilities for energy system transformation. By focusing on this nexus, research on energy democracy has the potential to produce results that are directly relevant to the pressing issues faced by contemporary energy practitioners and policy makers. In the remainder of this section, we will analyze each of the three components of this framework.

### Justice

Activists within the energy democracy movement assert that it is "rooted in the long-standing social and environmental justice movements" (Fairchild and Weinrub, 2017). Environmental justice refers to the rights of all people to benefit from a healthy environment, to be treated fairly in environmental decision-making, and to be meaningfully involved in environmental decision-making (Bullard, 2005). Environmental injustices are the inverse, wherein already underrepresented and historically marginalized communities experience disproportionate harms from the degradation of the environment (Bullard, 2005). From this perspective, justice is a component of energy democracy that calls attention to the distribution of risks and benefits in relation to energy decisions, who is participating in decision-making, whether there are equitable relationships, and the role of structural inequities—such as racism, colonialism, sexism, classism, and ruralism—on whom is served by energy decisions. Energy democracy also responds to concerns about climate change and climate injustice (Fairchild and Weinrub, 2017), noting that climate change and its damaging effects on human society disproportionately affect the most under-resourced and marginalized populations locally, nationally, and globally (Schlosberg and Collins, 2014). Related to climate injustice, energy injustice describes how energy extraction, production, and consumption also disproportionately harm the most under-resourced and marginalized populations, and the land and ecosystems upon which they lie, locally, nationally, and globally (Sovacool and Dworkin, 2014; Whyte, 2016). Walker and Day (2012) outline (1) income; (2) energy prices; and (3) housing and technology energy efficiency as distributional inequalities contributing to energy injustice. In response to these injustices, climate justice and energy justice, as derivatives of environmental justice, seek to articulate distributive and procedural justice with the pursuit of solutions and adaptations to climate change and the energy transition. Sovacool and Dworkin (2014) define energy justice "as a global system that fairly disseminates both the benefits and costs of energy services, and one that has representative and impartial energy decision-making" (p. 13). Justice, then, serves as a crucial element of energy democracy. As a heuristic, it encourages scholars to ask questions about, for example, who is served, what is the role of structural inequities, and how scholars and practitioners might factor justice into other sociotechnical factors that influence energy transitions. Yet,

while justice is a crucial component, energy democracy cannot be reduced to energy justice alone.

## Participation

Energy democracy has the potential to recognize a wide range of ways of participating and doing democracy. Worldwatch Institute's Sweeny (2014) notes that "A timely and equitable energy transition can occur only with greater energy democracy, which requires that workers, communities, and the public at large have a real voice in decision making" (p. 217). Energy democracy opens up a wide terrain, informed by participatory democracy and participatory communication, for thinking about the range of ways that people and more than humans can meaningfully participate in energy decisions (e.g., Eberly, 2002; Peterson et al., 2007; Walker, 2007; Callister, 2013; Chilvers and Pallett). If we view participation as co-produced in emergent settings and contexts, then it cannot take one normative form but emerges in a variety of moments and settings, including cases of public dialogue, solar clubs, climate activism, and energy use pilots (Chilvers and Longhurst, 2016). The forms of public participation most commonly designated as part of energy democracy include protesting and public comment periods. Although communication scholars rarely consider the intersections between different forms of participation in environmental decision making—for example between public participation and social protest (Pezzullo, 2007; Hunt et al., 2016)—participation can come in many other forms spanning from local to national, formal to informal, unjust to just. Research on conventional forms of public participation in environmental decision-making focuses mainly on exposing the flaws of public hearings and public meetings, revealing them to be Decide-Announce-Defend (DAD) models that present only a guise of participation and deliberation (e.g., Senecah, 2004). As such, attention within energy democracy focuses on moving beyond these *de facto* forms of public participation to realize processes that can encourage deliberation and participation from affected communities early and frequently during energy decision making.

When official processes of public participation are limited, unavailable, or unresponsive to community concerns, publics turn to "alternative" modes of participation and enacting rights to participation. For example, the Dakota Access Pipeline water protectors also constitute participation within energy democracy (Johnson, 2019). Phadke (2013) argues that a focus on participation is also essential to examining how not only fossil fuel decisions can elide meaningful citizen participation but also how sustainable renewable energies also need to be open to democratic participation that considers the needs of a particular community. She notes,

> Citizen campaigns are drawing our attention to the unforeseen and unknowable consequences of the green energy revolution. Whether it involves consensus conferences, citizen juries or science shops, citizens can engage with the intricacies involved in energy planning decisions. Based on our research, the next step is for planning officials to implement models of public engagement that empower citizens to produce designs, mitigation techniques and conflict resolution protocols that protect landscape and livelihoods while producing responsible green energy (p. 254).

In other words, whether considering fossil fuels or solar energy, participation is an essential element in realizing a successful democratic energy transition. Focusing on participation, then, encourages inquiries about, for instance, what forms of participation are being used in energy decisions, are extant forms of participation sufficient, and are local communities and relevant stakeholders (both human and non-human) involved in decision-making. While democracy is not a perfect system, particularly as practiced in purported democratic countries, it offers an ideal toward which many energy democracy advocates strive because it can provide a mechanism for broad participation and involvement in decisions. Moving toward this ideal is fundamentally dependent on the forms and functions of participation used in energy decision making, which are linked in with structures of power.

## Power

Although power can be synonymous with energy—such as wind power or nuclear power—it is used here to refer to a relationship between human actors and their capacities to act or not act freely. There are many definitions of power and intense theoretical debates about the concept. Our goal is not to choose one definition of power that is always at play in energy democracy, but to highlight that power—when thought about along a variety of different vectors—is an important aspect of energy democracy. Burke and Stephens (2017) argue that, "central to an energy democracy agenda is a shift of power through democratic public and social ownership of the energy sector and a reversal of privatization and corporate control" (p. 38). Two conceptions of power that are especially relevant to thinking about energy democracy are: (1) power as in a hierarchical exercise of power over others; and (2) power as a productive capacity to act (Foucault, 1990). Both of these conceptual frameworks underlie a structural perspective that focuses on the ability to use resources (e.g., money, social capital, sense of place) and rules (i.e., policies and laws) to exert pressure for system change (Feldpausch-Parker et al., 2012).

In the case of energy democracy movements, all of these perspectives come into play. For example, in terms of power over others, the practitioner report "Toward Energy Democracy: Discussions and Outcomes from an International Workshop" describes governments and energy corporations as having power over local communities to pursue energy agendas that lead to unequal distribution of costs and benefits. The report notes: "any kind of emancipatory energy transition would require a fundamental transformation of the existing geometries of power—and, as such, would demand a concrete and ambitious political strategy for how this kind of transformation might be achieved" (Angel, 2016, p. 4). In her research on Puerto Rico's energy transition, de Onís describes how energy colonialism "marks certain places and peoples as disposable by importing and exporting logics and materials to dominate various energy forms, ranging from humans to hydrocarbons" as a force that can impede the realization of energy democracy (p. 1). And Schneider

and Peeples identify how the rhetoric of energy dominance coming out of the Trump administration in the United States works at odds with energy democracy.

On the other hand, in terms of resistive power, calls for energy democracy depend on the hope that activism, grassroots democratic organizing, local governing structures, and public participation have the power to make changes in the status quo and possibly change existing hierarchies and relationships. As Angel (2016) notes, "it might be more productive to conceive of energy democracy as an ongoing process of democratization. Seen this way, energy democracy becomes the question of how we might go about organizing to craft a more socially just, sustainable and collectively controlled energy arrangements, within the historical and geographical circumstances we inhabit" (p. 4). And Sweeny (2014) similarly notes, "Energy democracy can and should be a call to arms for unions and other social movements. There is, it seems, no alternative" (p. 227). The complexities of power are crucial to any engagement with energy democracy. Some questions that address power include: how do we change the status quo in relation to who has power in the decision-making process? How does the dominant rhetorical situation constrain energy system narratives? What opportunities for resistance to the status quo are available to advocates for change? Where are there spaces to apply pressure to key people and institutional structures within the status quo? How is the more-than-human environment represented and by whom?

Taken together, justice, participation, and power are not simply words that appear frequently in the discourse of energy democracy advocates, they are necessary to the democratization of energy transition. Seeing energy democracy as being made up of the tension and consubstantiation between justice, participation, and power also serves as a framework with which scholars can examine the rhetorical performances of energy democracy.

## PERSPECTIVES ON ENERGY DEMOCRACY

This Research Topic is an outcome of the 2017 Energy Democracy symposium described above, with papers from both symposium participants and others working in this burgeoning area of study. In addition to this editorial, there are nine articles, each seeking to address energy democracy from different theoretical and empirical lenses, but all drawing on the concepts of power, justice, and participation. Though most of the papers focus on the global north, this Research Topic also attempts to capture studies from the global south and a US territory still trapped in its colonialization.

In *Operationalizing Energy Democracy: Challenges and Opportunities in Vermont's Renewable Energy Transformation*, Stephens et al. offer the state of Vermont in the United States as a promising case study for sub-national implementation of energy democracy. In many ways, Vermont is in the vanguard of renewable energy transformation in the United States, with ambitious goals of achieving 90% renewables by 2050 that consider both energy innovation and democratic practice as espoused by the energy democracy movement. This article characterizes the primary challenges and opportunities as (1) attempting to resist legacy energy systems like nuclear and fossil fuels and exchange them for solar and wind; (2) reclaiming energy systems through the promotion of cooperatives and community-owned energy projects; (3) restructuring energy systems through policies including the state's Comprehensive Energy Plan, Greenhouse Gas Action Plan, and Clean Energy Development Fund; and (4) creating town energy committees as a space for community level energy discussions. Vermont also serves as a leader in utility and policy innovation as well as having the first city in the United States that is 100% run off of renewable energy. These achievements, however, have not come without opposition or their own logistical challenges. This article predominantly focuses on interactions between participation and power while also touching upon justice.

In *Shared Yet Contested: Energy Democracy Counter-Narratives*, Burke explores various energy transition narratives in eastern Canada and northeastern United States, respective regions in the two countries with active energy democracy initiatives. He notes how energy transition is seen as more than just technology and economics, but also has a strong political dimension with sometimes consistent, and sometimes competing, narratives. Burke outlines four narrative elements in particular: collective action, values and norms, sociotechnical imaginaries, and temporal stories of human agency and change. Through this analysis, Burke highlights how energy democracy as both a movement and an organizing principle is not a single vision, but a diversity of energy democracies that diverge in "problem framings, the form and specificity of solutions, the critical stance, the historical positioning, and importantly, the scale, agency and model of social organization" (p. 12). Shared goals amongst these efforts include shifting from fossil fuels to renewables, preferences toward public and local control, and energy system change involving "changes to communities, politics, and economies" (p. 10). Similar to the Stephens et al. article, it focuses most strongly on participation and power.

Chilvers and Pallett's *Energy Democracies and Publics in the Making: A Relational Agenda for Research and Practice* lays out the argument that energy transition policymaking and academic literature too often treat energy democracy and participation as "a fixed, pre-given and "residual realist" view of the public and of democratic engagement" (p. 2). They counter that this limited view fails to capture how publics are shaped by and also shape "material settings, technologies, infrastructures, issues, participatory procedures, and political philosophies with which they are associated" (p. 4). They note how social science scholars are bringing light to such complexities, citing scholarship from STS, geography, political/democratic theory, anthropology, and energy communication. However, they also note that such efforts are fragmented. In response to this fragmentation, Chilvers and Pallett propose an agenda, outlining four avenues of scholarship including (1) "understanding energy democracies and their publics as diverse, relational, and co-produced" (p. 6); (2) "valuing difference and symmetry in relational theories of energy participation" (p. 6); (3) "toward conceptualizing systems of energy participation" (p. 7); and (4) "attending to the

performativity and situatedness of theory in studies of energy democracy and participation (p. 7). They also address research challenges and implications for practice. This article likewise focuses on intersections between participation and power.

In *Energy Democracy and the City: Evaluating the Practice and Potential of Municipal Sustainability Planning*, Teron and Ekoh use a case study of Washington, D.C.'s (USA) sustainable energy utility to examine energy justice and democracy in the nation's capital city. Their article proceeds from the challenge that, "for energy democracy to reach its potential, it must emphasize access to, and the affordability of, energy services for marginalized communities" (p. 2). This includes acknowledgment of threats from climate change and local environmental hazards that disproportionately impact marginalized communities, thus serving as further justification for moving to sustainable fuels. In this case study, they found that planning and design processes, though progressive from a green jobs perspective, failed to think outside of the economics of creating green employment. Furthermore, the processes also ignored non-English speaking residents, thus further alienating them from the political system. A final critique is failure to include the transportation sector in energy planning. These concerns thus serve as spaces for improvement in governance, equality, and outreach. This article focuses mostly on justice, but also touches upon participation and power.

McKasy and Yeo examine strategic communication of net-metering in *A Comparative Case Study of Electric Utility Companies' Use of Energy Democracy in Strategic Communication*. This study is based on utilities' use of communication strategies outlined in *The Future of Energy: A Working Communication Guide for Discussion*, a document created by the Edison Electric Institute and Maslansky & Partners (a communication firm) to help reorient state-level discussions of net-metering policy to favor utilities. McKasy and Yeo looked specifically at NV Energy (Nevada) and Rocky Mountain Power's (Utah) implementation of communication strategies outlined in the Guide. Through their analysis of utility company websites and press releases, they found that these companies used key terms that seemingly aligned with energy democracy and social justice tenets to push utility-scale renewable projects over, for example, private solar installations. Such efforts are seen by many as counter to energy democracy, where energy consumers can become prosumers (producers and consumers). Though both utilities took a page from the Guide, they each tailored their communications to specific state-level discussions, implementing different strategies based on whether they used the Guide proactively vs. reactively. This article focuses predominantly on strategic communication as power, and suggests a new turn on greenwashing.

*State-Level Renewable Energy Policy Implementation: How and Why Stakeholders Participate*, by Rountree and Baldwin, examines stakeholder participation in Renewable Portfolio Standards (RPS) policy implementation in the states of Colorado and Nevada in the United States. Though both states have RPS policies, their "histories of RPS adoption, modification, and implementation" (p. 5) differ. The article focuses on different mechanisms for participation as well as various incentives, or in some cases disincentives, to engage in energy decision-making processes. Rountree and Baldwin note that, although public participation in decision-making is often mandated, that participation does not have to be meaningful, which they define as "stakeholder inputs that inform or shape...decisions" (p. 2). As the electrical grid changes from a system dominated by fossil fuels and centralized energy production by utility companies to smaller scale renewable power generation that is often distributed in nature, stakeholder participation is also changing with the insertion of new players. The authors of this article attempt to capture this potentially changing participation landscape. Through the use of stakeholder interviews, they determine that many of the stakeholders found the opportunities to participate to be superficial and reactive in nature, but continued to participate for the sake of coalition building and a greater chance to influence long-term policy processes. They also determined that stakeholders, especially those more seasoned in such processes, found multiple ways to participate. Finally, they concluded that the regulatory environment often dictated the types of participation processes and incentives used, thus impacting outcomes of such processes. Rountree and Baldwin focus almost exclusively on participation, although they also address shifting power configurations, noting that certain stakeholders have greater access to decision-makers and knowledge of participation options.

Schneider and Peeples focus on the Trump Administration's use of dominance in U.S. energy policy rhetoric in *The Energy Covenant: Energy Dominance and the Rhetoric of the Aggrieved*. Focusing specifically on now former Secretary of Interior Ryan Zinke's September 2017 speech at the Heritage Foundation, a conservative think tank, the authors examine the use of energy dominance as a covenant renewal to American exceptionalism and, by extension, the fossil fuel industry. The authors argue that Zinke's speech moves away from energy security and energy independence rhetoric, replacing it with energy dominance, whose grievances include (1) "too much environmental regulation"; (2) "attack on the free market"; and (3) the working and middle classes have suffered as fossil fuels have suffered" (p. 6). They argue that the Trump administration has attempted to equate fossil fuels with "social order, justified through the exceptionalism of chosen Americans, who if they again renew their covenant with the values of neoliberalism will raise America to a position of superiority with unrestrained expressions of global power" (p. 6). They point out that such rhetoric also frames environmental efforts by the Obama Administration as causing economic suffering to the white middle and working classes. Schneider and Peeples note that energy dominance is framed by the Trump Administration as restoring the covenant, moving energy policy back to privileging industry voices over all others, and effectively silencing energy democracy movements. This article focuses on the use of rhetoric as a means to exert power over others, to justify injustice, and to limit participation of those who would reshape the narrative of energy policy.

In *Can Energy Democracy Thrive in a Non-Democracy?*, Delina answers this question with a resounding yes by making the case that energy democracy *is* possible at the community level in non-democratic nations such as Thailand. Focusing

on a community in the town of Pa Deng in the Phetchaburi province near Kaeng Krachan national park, Delina conducted interviews, small group discussions, and observations to examine efforts at localized energy transitions. He found that roughly a hundred households in the community had self-organized into a communal network focused on "resiliency, cohesiveness, local economy, livelihoods, and capacity building," drawing from King Bhumibol Adulyadej's ideals of a sufficiency economy (p. 3). Energy transitions were included as the community sought to move away from more traditional fuel sources (e.g., charcoal, kerosene, and firewood) to renewables such as biogas and solar. From his qualitative data, Delina found overlap between concepts used in energy democracy and the case study community's efforts, such as collective action and co-production. Public participation, which Delina posits as basic to democracy, was the main focus of this article. Considerations of justice and power are implied, particularly when considering collective action and co-production, although not explicitly discussed.

Finally, de Onís addresses the longstanding impacts and challenges of being a colonial territory in *Energy Colonialism Powers the Ongoing Unnatural Disaster in Puerto Rico*. This article addresses the impact of Hurricane Maria, a category 5 hurricane that made landfall on September 20, 2017, on a US island territory already suffering from economic, environmental, and energy crises in addition to recent damage from Hurricane Irma just weeks before. Maria caused massive damage and loss of life to the islands, with long term issues of access to electricity and potable water. The issues post-Hurricane Maria, as de Onís notes, are endemic of the territory's colonialist history and continuing experience with energy colonialism. She explains how legislation including the Jones Act, Operation Bootstrap, and the Puerto Rico Oversight Management and Economic Stability Act have created major hurdles to restructuring energy infrastructure on the islands (the territory is comprised of one large island, known as the Big Island, and several small islands). Even with such daunting challenges, she points to energy democracy efforts led by academic institutions that "sought to disrupt Puerto Rico's electric energy system and the 'energy *status quo* social network' by creating a framework for a sustainable energy ethic committed to deliberation and decision-making among diverse actors" (p. 3) as well as grassroots solar advocacy. Though this case study is particular to Puerto Rico, as de Onís points out, it is also generative for other entities struggling with colonial and post-colonial politics, and any efforts to transition away from a carbon-based economy. This article predominantly focuses on justice while also noting interstices with participation and power.

## FUTURE DIRECTIONS FOR ENERGY DEMOCRACY RESEARCH

The justice, participation, and power framework opens new pathways for a research agenda in energy democracy. Within this collection, three themes dominate and suggest directions for continued study. First, participation emerged as the crucial process for reconfiguring power relations in ways that enable greater justice. Second, focusing on the interplay between justice, participation, and power highlights an inherent tension between collective (e.g., national-level) and individualistic (e.g., local) action addressing energy and climate. Although we recognize that local action enables exploiting fissures in systems by offering creative alternatives, the danger is losing sight of the national-level (or equivalent) governance structures that are ultimately needed for collective action. As several of the chapters highlight, we must be aware that both collective and individual level decision-making can be unjust and reify problematic power dynamics, highlighting why simultaneously attending to justice, participation, and power is crucial for energy democracy. Scholars need to be willing to work at the crux between collective (national) and individual (local) change, recognizing and maintaining the tension because solely focusing on either is exclusionary. Third, energy democracy research must be responsive to and engaged with the energy democracy movement. The research should have heuristic value to the energy democracy movement and energy prosumers. Energy democracy is about power sharing, rather than power over others.

Beyond the justice, participation, and power framework we presented, we also see a variety of other topics, terminologies, and tensions that might be fruitfully engaged in future research. Terms that need further definition and exploration include energy justice vs. energy democracy, environment vs. sustainability, energy coloniality vs. resource colonialism, energy transition vs. renewable energy transition, and energy poverty. Further, we encourage examination of these touchstone concepts that play into energy democracy: voice, scale, location, stakeholders, inclusivity, temporality (e.g., crisis mentality), and violence (e.g., intimidation, coercion).

In sum, energy democracy is a transdisciplinary networked area of study at the intersection of practitioners and researchers that avoids extractive models of research (Sprain et al., 2010). This engaged research agenda seeks to be a part of envisioning and then demanding a more democratic energy transition that is responsive to appropriate levels of governance. It bridges between social and technical knowledge as well as between practice and research. Given contemporary climate and energy exigencies, including our impending energy transition and the need for solutions grounded in research, we call for scholars to critically engage with an energy democracy research agenda. It is not our intention to set an agenda for the energy democracy *movement*, but to encourage conversation about a research agenda between scholars and on-the-ground energy democracy practitioners.

## AUTHOR CONTRIBUTIONS

AF-P, DE, and TP all contributed to the conceptualization and writing of this manuscript.

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