

Anti-Resilience: A Roadmap for Transformational Justice within the Energy System*

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Climate change mitigation and adaptation require a transition of the energy system from one that relies on fossil fuels and is vulnerable to major climate events to one that is dependent on renewable energy resources and able to withstand climate extremes. Resilience has emerged as a conceptual frame to drive both climate and energy policy in this transitional moment. For example, in the wake of major storms such as Hurricanes Harvey and Maria, policymakers have frequently called for greater resilience of the energy system and resilience of vulnerable communities impacted by the storms.

This Article focuses on resilience at the system level. It argues that, in many cases, resilience of the energy system may actually reify structural inequality and exacerbate vulnerability. A hardening of existing energy infrastructure may also operate to harden existing social, economic, and environmental injustices that disproportionately burden the poor and people of color. Such situations call for new framings beyond resilience and transition toward liberation and transformation. This Article argues that, to facilitate the liberation of low-income communities and communities of color from the disproportionate impacts they face under the current energy system—and to foster a just transformation of the energy system—activists, policy-makers, and scholars engaged in the work of climate and energy justice must adopt a framework of anti-resilience: An anti-racist and anti-oppression policy approach focused on the greater social and economic inclusion of people of color and low-income communities in the renewable energy transition.

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* I dedicate this Article to my father and the people of Port Arthur, Texas.

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INTRODUCTION

resilience—2.a. Elasticity; the power of resuming an original shape or position after compression, bending, etc. . . . 5. The quality or fact of being able to recover quickly or easily from, or resist being affected by, a misfortune, shock, illness, etc.; robustness¹

A recent New York Times article chronicled the development of a new phenomenon in early childhood education: school playgrounds designed to create “resilient” children who can better navigate the dangers of the world around them.² Resilience has slipped into the collective consciousness as something to be desired, sought after, a normative good to which communities devastated by horrific events and individuals who have experienced tragedies aspire. Resilience appeals to the innate human desire for survival. However, the idea that we should all merely “bounce back” after experiencing trauma obfuscates important questions: What are we bouncing back into? Are the circumstances into which we are returning unjust or unequal? If so, rather than “bouncing back,” should we not work to remedy the underlying inequities first? These questions have particular resonance in the climate change era. While climate change requires a particular type of

¹ OXFORD ENGLISH DICTIONARY, *Resilience*, n., <http://www.oed.com/view/Entry/163619?redirectedFrom=resilience#eid>, archived at <https://perma.cc/LW7X-NTBS> (last updated Mar. 2010).

² Ellen Barry, *In Britain’s Playgrounds, ‘Bringing in Risk’ to Build Resilience*, N.Y. TIMES (Mar. 10, 2018), <https://www.nytimes.com/2018/03/10/world/europe/britain-playgrounds-risk.html>, archived at <https://perma.cc/46CX-JS4C>.

resilience and flexibility at individual and institutional levels, blanket reliance on resilience as a normative good could mask deeper reckonings with the unequal conditions that exacerbate the very vulnerability we seek to mitigate.

Ecologist Crawford Stanley Holling's seminal article, *Resilience and Stability of Ecological Systems*, defines resilience as the "capacity of a complex ecological system to persist or to absorb change while preserving its structure and function."³ Holling's work focuses on complex ecological systems, but since his 1973 publication, the term "resilience" has become ubiquitous across disciplines, including within the climate change policy space.⁴ Legal discourse, too, demonstrates this trend. In a recent review of legal literature focused on the use of the conceptual outlines of resilience, Tracy-Lynn Humby notes a rise in the use of resilience and "related concepts such as adaptive management, adaptive co-management and adaptive governance, with an increase particularly noticeable after 2006."⁵

Yet, as the term has become ubiquitous, it has lost some of its meaning. As Davidson et al. note, in "moving from ecological to social contexts . . . resilience has lost some of its precision . . . so that it is now characterized by 'blurred boundaries of concepts, metaphors and an implicit mix of normative and positive aspects.'"⁶ Recent scholarly critiques of resilience also suggest that the broad usage of the term, like "sustainability" before it, can detract from meaningful operationalizing of resilience,⁷ or worse, "the very malleability and plasticity of the term itself means that it can act as a boundary object or bridging concept, but may also be co-opted by different interests."⁸

Moreover, repeated reliance on resilience language could insulate the substance of the concept from meaningful interrogation and critique.⁹ This Article builds upon the critiques of resilience within the social science literature and fills a critical gap in the emerging interdisciplinary literature of energy justice to argue that the use of resilience framing in energy policy could have pernicious impacts on people of color and low-income communi-

³ C. S. Holling, *Resilience and Stability of Ecological Systems*, 4 ANN. REV. ECOLOGY & SYSTEMATICS 1, 17 (1973).

⁴ See *infra* Part II. See generally Julie L. Davidson et al., *Interrogating Resilience: Toward a Typology to Improve its Operationalization*, 21 ECOLOGY & SOC'Y, no. 2, art. 27, June 2016.

⁵ Tracy-Lynn Humby, *Law and Resilience: Mapping the Literature*, 4 SEATTLE J. ENVTL. L. 85, 101 (2014).

⁶ Davidson et al., *supra* note 4, at 1 (citations omitted).

⁷ Humby, *supra* note 5, at 88 ("[T]he increased appropriation of resilience by different disciplines and communities of practice increases the potential for the term to become an empty signifier, a fate which others suggest has already befallen sustainability" and such use can "enable vastly different societal interests to assume they are working toward a common project while their internal contradictions are so great that the signifier does little to change the status quo.").

⁸ Katrina Brown, *Global Environmental Change I: A Social Turn for Resilience?*, 38 PROGRESS HUM. GEOGRAPHY 107, 114 (2014).

⁹ Humby, *supra* note 5, at 88.

ties. A gentle shake of my own family tree brings these impacts into sharp relief.

The place where my dad grew up smells of oil, sulfur, salt. My father grew up in Port Arthur, Texas, a poor, highly segregated, majority-minority town home to mainly African Americans and Latinos.¹⁰ Like Houston only an hour-and-a-half drive away, Port Arthur was hit hard by Hurricane Harvey.¹¹ Sitting on the Texas-Louisiana border, the town forms part of the nucleus of the nation's fossil fuel energy system.¹² Port Arthur houses the terminus for the Keystone XL pipeline, as well as the largest refinery in the United States, owned by Motiva (formerly Texaco), a refinery that processes 600,000 barrels of crude oil daily.¹³ The same community is home to five other petrochemical plants and the Veolia trash incinerator facility.¹⁴

In Port Arthur, thick, sulfuric air hangs over the Texas coast,¹⁵ as men, mostly men,¹⁶ labor in oil refineries and rigs stretching deep into the Gulf of Mexico. Black and brown bodies toil in offshore facilities that can make them sick¹⁷ and produce black and brown liquid that flows through pipelines

¹⁰ *Map of Race and Ethnicity by Block Group in Port Arthur*, STAT. ATLAS, <https://statisticalatlas.com/place/Texas/Port-Arthur/Race-and-Ethnicity>, archived at <https://perma.cc/KBK6-R3NC> (last updated Apr. 18, 2015) (highlighting a majority of zoning blocks in downtown Port Arthur ranging from 77–100% African American).

¹¹ Foti Kallergis, *Road to Recovery: Port Arthur's Rebuild Slow After Harvey*, ABC13 (Nov. 20, 2017), <http://abc13.com/road-to-recovery-a-slow-rebuilding-in-port-arthur/2673598/>, archived at <https://perma.cc/SND6-N9PP> (“Nearly 60,000 people were affected by Harvey’s flood in late August. Port Arthur city leaders said nearly the entire town was underwater.”).

¹² See Catherine Ngai & Bryan Sims, *U.S. Oil Exports Boom, Putting Infrastructure to the Test*, REUTERS (Oct. 30, 2017), <https://www.reuters.com/article/us-usa-oil-exports/u-s-oil-exports-boom-putting-infrastructure-to-the-test-idUSKBN1CZ0CI>, archived at <https://perma.cc/ZQ8N-9SD9> (including Port Arthur in its list of “primary places where crude [oil] can be exported”). Fossil fuels still comprise a large part of the United States energy mix. For example, according to the United States Energy Information Administration, the nation derived about 63% of its energy from fossil fuels in 2017. *Frequently Asked Questions*, U.S. ENERGY INFO. ADMIN. (last updated Mar. 7, 2018), <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>, archived at <https://perma.cc/4NX9-6HX5>.

¹³ Wen Stephenson, *Welcome to West Port Arthur, Texas, Ground Zero in the Fight for Climate Justice*, THE NATION (June 3, 2014), <https://www.thenation.com/article/welcome-west-port-arthur-texas-ground-zero-fight-climate-justice/>, archived at <https://perma.cc/46P2-N7MK>.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ In 2017, approximately 748,000 people worked in the business of mining, quarrying, and oil and gas extraction. Of these workers, 87.7% were men, 5.6% were Black, and 18.6% were Hispanic. *Labor Force Statistics from the Current Population Survey*, BUREAU OF LAB. STAT. (last updated Jan. 19, 2018), <https://www.bls.gov/cps/cpsaat18.htm>, archived at <https://perma.cc/YDE7-LL3K>.

¹⁷ See *The Localized Health Impacts of Fossil Fuels*, CLIMATE NEXUS, <https://climatenexus.org/climate-issues/health/the-localized-health-impacts-of-fossil-fuels/>, archived at <https://perma.cc/WVA2-RJRM> (last visited July 13, 2018) (“Hydrocarbon, flue gas and particular emissions from oil refining and combustion are correlated with increased risk of death from cardiovascular and respiratory illnesses. Workers in the oil and gas industries experience higher rates of occupational-related fatalities than all other U.S. industries combined.”); see also *Health Hazards Associated with Oil and Gas Extraction Activities*, U.S. DEP’T LAB., <https://www.osha.gov/SLTC/oilgaswelldrilling/healthhazards.html>, archived at <https://perma.cc/53XH-FELN> (last visited July 13, 2018) (noting that the potential health hazards for oil and gas drilling

across sacred native lands, damaging waters that form the lifeblood of surrounding communities.¹⁸ The black and brown liquid arrives in facilities in black and brown communities, where it burns and creates smoke that is breathed into the lungs of black and brown bodies, sickening nearly everyone.¹⁹ The burning of this liquid further warms the planet, creating storms that harm black and brown communities in disproportionate numbers,²⁰ dispossessing them of generations of accumulated wealth.²¹ This is our modern energy system. This system affects black and brown bodies, along with the generations of poor whites who have mined coal in places like West Virginia and Kentucky. It is a system characterized by “sacrifice zones” that place extraordinary environmental burdens on some communities in order to bene-

activities include hydrogen sulfide, silica, noise, diesel particulate matter, hazardous chemicals, naturally occurring radioactive material (NORM), temperature extremes, and fatigue).

¹⁸ See Oliver Laughland & Laurence Mathieu-Léger, *Life on the Keystone XL Route: Where Opponents Fear the ‘Black Snake’*, THE GUARDIAN (May 2, 2017), <https://www.theguardian.com/us-news/2017/may/02/keystone-xl-pipeline-route-water-native-american-reserves>, archived at <https://perma.cc/8DUS-C495> (“[Keystone XL’s] potential pathway crosses 56 rivers and streams . . . and comes close to a handful of Native American reserves.”); see also Joe Heim, *Showdown Over Oil Pipeline Becomes a National Movement for Native Americans*, WASH. POST (Sept. 7, 2016), https://www.washingtonpost.com/national/showdown-over-oil-pipeline-becomes-a-national-movement-for-native-americans/2016/09/06/ea0cb042-7167-11e6-8533-6b0b0ded0253_story.html?utm_term=.0586d068ae11, archived at <https://perma.cc/H5R3-ZX89> (“The tribe says it also is fighting the [Keystone XL] pipeline’s path because . . . it traverses sacred territory taken away from the tribe in a series of treaties that have been forced upon it over the past 150 years.”).

¹⁹ See, e.g., Courtney Cherry, *The Keystone Pipeline: Environmentally Just?*, 6 ENVTL. & ENERGY L. & POL’Y J. 125, 131 (2011) (describing one resident’s experience of living near the refineries in which the resident states, “Like I panic and can’t catch enough air, and if I go outside it’s worse. I have to strap on my breathing machine [oxygen supply] at night so I don’t pass out” and noting a recent study indicating that roughly 80% of West Port Arthur’s residents reported cardiovascular and respiratory issues, and that around the same percentage of residents “on the fence line from the numerous Port Arthur refineries suffered from ear, nose, and throat problems compared with around [20%] in the control group”); see also Stephenson, *supra* note 13.

²⁰ See Douglas Fischer, *Climate Change Hits Poor Hardest in U.S.*, SCI. AM. (May 29, 2009), <https://www.scientificamerican.com/article/climate-change-hits-poor-hardest/>, archived at <https://perma.cc/64VC-9RBZ> (quoting Rachel Morello-Frosch, “Climate change does not affect everyone equally in the United States. . . . People of color and the poor will be hurt the most.”); see also Rachel Morello-Frosch, *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap*, USC PROGRAM FOR ENVTL. & REGIONAL EQUITY (May 2009), https://dornsife.usc.edu/assets/sites/242/docs/ClimateGapReport_full_report_web.pdf, archived at <https://perma.cc/3UWD-KPL7>; *Developing Countries Need Urgent Support to Adapt to Climate Change*, UNFCCC (Oct. 12, 2017), <https://unfccc.int/news/developing-countries-need-urgent-support-to-adapt-to-climate-change>, archived at <https://perma.cc/5R4U-WQJA> (noting that the IMF’s October 2017 World Economic Outlook Report predicts that “developing countries will suffer disproportionately from rise in temperatures since they are situated in relatively hot climates. Within developing countries, the poor would likely be the most heavily affected by climate change”).

²¹ See Hsiang et al., *Estimating Economic Damage From Climate Change in the United States*, 356 SCI. 1362, 1362 (2017) (“[R]isk is distributed unequally across locations, generating a large transfer of value northward and westward that increases economic inequality. By the late 21st century, the poorest third of counties are projected to experience damages between 2 and 20% of county income (90% chance) under business-as-usual emissions.”).

fit other users within the system.²² This is a system that should be transformed, rather than made more resilient.

The fossil-fuel based energy system serves as a site for ongoing structural inequality because it places disproportionate burdens on poor communities and communities of color. Climate change demands a reimagining and a transition of the current global energy system to one that relies on clean energy resources rather than fossil fuels, is flexible enough to withstand major weather events, and renders communities less vulnerable to climate extremes. Energy policy, at this particular moment of transition, could restructure society by redistributing power along lines of race and class. This redistribution could help to mitigate vulnerability in the entire energy system, making us all better able to withstand the catastrophic climate change events that lay ahead. However, if system resilience, rather than system transformation, becomes the focus of energy policy, we will miss an important opportunity to foster lasting justice.

“Resilience” calls for an energy system that is able to bounce back from climate change events. In this Article, I explore the dimensions of the question “What are we bouncing back into?” within the context of energy policy and the clean energy transition underway in the United States. Throughout this Article, I argue for a disruption of the normative underpinnings of resilience. In particular, I argue that before calling for and utilizing energy policy to facilitate resilience, we must assess and dismantle features within the pre-existing energy system that exacerbate conditions of vulnerability in low-income communities and communities of color.

In essence, in this moment of transition I advocate for:

anti-resilience—The quality of resisting the obfuscation of systemic violence enacted upon communities of color and the poor in the name of energy. The act of engaging in a politics of anti-racism and anti-oppression that exposes the roots of structural inequality and vulnerability, and illuminates the path for system transformation.

Energy policy serves as one landscape for anti-resilience, but like conceptual framings of “resilience,” the insights of an anti-resilient framework could apply across fields.

Before continuing, I’d like to address the question of whether there is ever a time when we “want” to be resilient. Yes, we require resilience at the individual level in order to maintain a sense of self amid external turmoil

²² The term “sacrifice zones” refers to communities or regions that bear disproportionate health and environmental risks to facilitate development activities. See, e.g., Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562, 598 n. 164 (1992) (describing emergence of term in the context of the health impacts of the petrochemical and nuclear industries).

and chaos.²³ At the community level, resilience assures groups that their people are solid, that a safety net, a familiar fabric, keeps them safe. This Article does not address resilience at the levels of self and community, but rather aims to expose and disrupt the narratives of resilience at the structural and systemic levels that facilitate ongoing injustice. This Article examines explicit calls for resilience within the energy system as well as the implicit incorporation of resilience thinking within transitional energy policies.

Anti-resilience radically shifts the locus of resilience thinking and practice—featured prominently in renewable energy policy and climate change adaptation discourse—from the external forces²⁴ that disrupt a system to the internal systemic components that create inequality and foster vulnerability. As well documented in environmental justice literature, the modern energy system systematically harms people of color and low-income communities.²⁵ By disproportionately bearing the burden of a fossil-fuel based energy system, these communities provide an indirect subsidy to other users in the energy system and to the fossil fuel industry itself.²⁶ While the resilience frame of renewable energy and climate change adaptation policy fails to disrupt the underlying equity dynamics within the energy system, an anti-resilience frame would facilitate a transition of the energy system that does not merely replicate existing inequality, but rather, is transformative. This Article exposes the embedded power and politics within the energy system, and argues that an anti-resilient approach allows for transformational justice.

Here, I build on important environmental and climate justice literature by introducing a critique of the resilience framework that is embedded within existing approaches to energy policy. My central intervention in these discourses is to suggest that energy policy, as currently constructed, actually imports normative ideas of resilience that reify structural inequality and lead to environmental and climate injustice. I argue that approaches to energy policy rooted in anti-resilience can help to disentangle the lives of people of color and the poor from the devastation wrought by the modern energy system.

This Article situates itself squarely within the emerging energy justice literature. Energy justice—nascent in legal academia, but rapidly growing as an interdisciplinary field of scholarly inquiry—has not yet dealt directly with the problematic features of resilience. However, the transformative po-

²³ See, e.g., RICK HANSON, *RESILIENT: HOW TO GROW AN UNSHAKABLE CORE OF CALM, STRENGTH, AND HAPPINESS* (2018).

²⁴ Brown, *supra* note 8, at 109 (noting one critique of resilience is that “it focuses on a system which is disturbed by external or exogenous forces, so it underplays the internal, endogenous and social dynamics of the system”).

²⁵ See, e.g., Robert D. Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, 38 ENVTL. L. 371, 372 (2008) (using 2000 Census data to demonstrate that “people of color and low-income communities are still the dumping grounds for all kinds of toxins” and that “hazardous waste host neighborhoods are composed predominantly of people of color”).

²⁶ See generally *id.*

tential of energy policy makes the field of energy justice the framework to provide for rigorous critiques of resilience.²⁷ This Article also aims to build a bridge from academic discourse to energy policymakers struggling to craft energy policy that addresses historical, structural harms the existing energy system has inflicted on people of color. The same bridge connects the ideas of anti-resilience to a growing and robust global movement for energy democracy and energy justice. My hope is that the activists engaged in this transformative social justice work find this Article useful in shaping a more just energy system.

This Article proceeds in four parts. In Part I, I describe the current energy system and how the system has historically burdened communities of color and low-income communities, impacting nearly every aspect of life. Here, I focus not only on fossil-fuel energy development, but also on recent policy efforts concerning the energy transition away from fossil fuels toward clean energy, which continue to embed inequality and place disproportionate burdens on communities of color.

In Part II, I introduce the resilience literature. Here, I note the ubiquitous use of the resilience framework across disciplines and the need for more nuanced frameworks that incorporate and acknowledge pre-existing structural inequality within a given system. I offer recent critiques of resilience by social science scholars, and I argue that the indeterminacy of resilience framing in both the social sciences and the law renders the construct inapt in the energy policy context and shields unequal aspects of the energy system from critique. In this discussion, I also highlight the failure of energy and climate justice literature to address and critique the use of resilience in transitional policy frameworks.

Part III focuses on both the subtle and explicit manifestations of resilience framing in the state and federal energy policies that claim to facilitate a clean energy transition. In this Part, I examine how resilience framing is embedded within renewable energy policy. I also explore three key policy efforts that implicitly embed conceptions of resilience: at the state level, net energy metering policy and community energy policy, and at the federal level, the Federal Energy Regulatory Commission's regulatory proceeding concerning resilience of the nation's power grid. In each, resilience framing masks existing inequalities perpetuated by the energy system and prevents the deeper, transformative disruption of the energy system required to facilitate a just transition.

²⁷ See generally Gavin Bridge et al., *Energy Infrastructure and the Fate of the Nation: Introduction to Special Issue*, 41 ENERGY RES. & SOC. SCI. 1 (2018); Heather Plumridge Bedi, *'Our Energy, Our Rights': National Extraction Legacies and Contested Energy Justice Futures in Bangladesh*, 41 ENERGY RES. & SOC. SCI. 168 (2018); Mary Finley-Brook et al., *Critical Energy Justice in US Natural Gas Infrastructuring*, 41 ENERGY RES. & SOC. SCI. 176 (2018); Giuseppina Siciliano et al., *Large Dams, Energy Justice and the Divergence Between International, National and Local Developmental Needs and Priorities in the Global South*, 41 ENERGY RES. & SOC. SCI. 199 (2018).

In Part IV, I introduce principles of anti-resilience. Anti-resilience explicitly utilizes an anti-racist and anti-oppression frame and creates an opening for policy approaches that aim for greater inclusion of people of color and low-income communities in the renewable energy transition. Anti-racist approaches to policy center the concerns and historical burdens of people of color, and anti-oppression approaches to policy explicitly avoid the burdening of a few communities to benefit the whole. Anti-resilience, I argue, will facilitate a more productive disruption of our energy system than current approaches to the energy transition offer, and simultaneously work to dismantle the structural inequality embedded in the current system. Throughout this Part, I offer a theoretical framework of principles for anti-resilience, as well as concrete approaches to incorporating anti-resilience in energy policy making.

I now turn to the energy system.

I. ORIGIN STORIES: ENERGY, INEQUALITY, AND RACE

I want to return to Port Arthur for a moment. In many ways, this small town reflects the most extreme version of the racialized tragedy created by the nation's energy system.²⁸ The town sits in a region particularly prone to hurricanes, evidenced in recent years by a string of major hurricanes: Katrina, Rita, and, most recently, Harvey.²⁹ In this place, where certain census tracts are over 77% African-American, others are 30% to 65% Latino,³⁰ and the median Hispanic and African-American household incomes are respectively \$33,000 and \$25,300,³¹ the vulnerabilities created by the energy system are exposed by a rapidly changing climate.

Storms like Harvey portend a future that threatens burdened communities like Port Arthur, which form the backbone of the nation's energy sector; however, the calls for "resilience" after storms such as Harvey could pose unseen threats to the wellbeing of such communities. For example, in describing the particularly active 2017 hurricane season, RAND researcher Melissa Finucane writes, "[t]he extremely active 2017 Atlantic hurricane season raises serious questions about community resilience in the Gulf of Mexico."³² She queries, "[t]o what extent are communities where infra-

²⁸ See generally Stephenson, *supra* note 13.

²⁹ Kallergis, *supra* note 11; Dan Wallach, 'Sea Monster' Rita Devoured Southeast Texas, BEAUMONT ENTERPRISE (June 16, 2015), <https://www.beaumontenterprise.com/news/article/Hurricane-Rita-Eight-years-ago-today-4836744.php>, archived at <https://perma.cc/82RE-PVPN>; David Roth, *Texas Hurricane History*, NAT'L WEATHER SERV. 68–71, <https://www.weather.gov/media/lch/events/txhurricanehistory.pdf>, archived at <https://perma.cc/EAB4-XWEQ> (last updated Jan. 6, 2010).

³⁰ See *Map of Race and Ethnicity*, *supra* note 10.

³¹ *Household Income in Port Arthur, Texas*, STAT. ATLAS, <https://statisticalatlas.com/place/Texas/Port-Arthur/Household-Income>, archived at <https://perma.cc/R8PC-5CPJ> (last updated Apr. 18, 2015).

³² Melissa L. Finucane, *How to Rebuild After This Year's Hurricane Season? Invest in Resilience*, RAND CORP.: THE RAND BLOG (Nov. 6, 2017), <https://www.rand.org/blog/2017/>

structure is repeatedly in harm's way able to withstand the impacts of major storms?"³³ While it is important to consider the safety and security of roads, bridges, and critical power infrastructure, such resilience thinking masks more important questions such as: Why are these particular communities consistently in harm's way? What renders these communities so vulnerable in the face of major storms and other climate change-related events? What caused and what perpetuates this vulnerability?

The following sections outline an energy system that, as many have documented, has systematically isolated people of color and low-income people in communities with compromised air quality, dirty water, and little hope of economic empowerment. This largely descriptive overview of the energy system recapitulates much of the well-known environmental justice literature; however, viewing the particularly damaging aspects of the energy system through the lens of resilience brings the need for an energy system overhaul into sharp relief. In effect, the following sections make the case for "anti-resilience," rooted in both anti-racism and anti-oppression, to upend an energy system built on the backs of people of color and the poor.

A. *Formation of an Unjust Energy System*

Black and brown bodies have always borne the burden of the United States' energy system. In *Energy Democracy: Advancing Equity in Clean Energy Solutions*, which argues for a bottom-up transition of the nation's energy system away from fossil fuels, civil rights activists Denise Fairchild and Al Weinrub describe the ways that "[the] fossil fuel economy has had a disproportionate impact on people of color in the United States" and has shaped geographies and possibilities for communities of color.³⁴ Fairchild and Weinrub suggest that "[t]he rise of fossil fuel power in the last two hundred years" simply facilitated the transition from "the slave system of production with free labor" to an industrialized U.S. economy that continued to burden Black people.³⁵ Fossil fuels, they argue, led to "the westward expansion, growth of urban centers, rise of monopoly capitalism, concentration of wealth, migration and immigration of working-class people and people of color, segregation, impoverishment, and creation of urban slums."³⁶

After World War II, oil-fueled suburban sprawl and *de jure* segregation left many Black and Latino families in "industrial zones, near toxic release sites and coal-burning power plants, as a result experiencing severe health impacts" such as "respiratory ailments, cancers, heat-related morbidity and

11/how-to-rebuild-after-this-years-hurricane-season-invest.html, archived at <https://perma.cc/86SC-VZU5>.

³³ *Id.*

³⁴ ENERGY DEMOCRACY: ADVANCING EQUITY IN CLEAN ENERGY SOLUTIONS 8 (Denise Fairchild & Al Weinrub eds., 2017).

³⁵ *Id.*

³⁶ *Id.*

mortality, human development and mental and stress-related disorders, and vector-and water-borne morbidity and mortality.”³⁷ The federally-regulated banking industry exacerbated the impacts of fossil-fuel-driven development by engaging in restrictive lending practices known as redlining that effectively “trapped low-income populations in toxic communities.”³⁸ The communities impacted by the development and growth of the fossil fuel system can be thought of as “frontline communities,” living in the shadows of the nation’s most polluting energy industries with very little political power to create change.³⁹

In *Decolonizing Energy*, Myles Lennon expands the foregoing narrative by arguing that the energy of black bodies has always enabled the exploitation of nature. He eloquently describes how the energy of enslaved black Africans initially powered the engine of the cotton industry and how the risks and externalities of the energy system continue to disproportionately burden black bodies.⁴⁰ He notes that even after the abolition of slavery, when enslaved Black people no longer were the main mechanism for transforming matter (the essence of “energy”), “the symbolic order that enabled colonial society to denigrate black lives in the interest of exploiting nature proved resilient.”⁴¹ “In other words,” he argues, “the racial and class-based hierarchies that privileged white property owners . . . over landless laborers . . . stayed firmly intact as the Industrial Revolution ignited the ascendance of fossil fuels.”⁴² Moreover, “the transition to fossil fuels institutionalized racial hierarchies in ways that intersected with regimes of capitalist exploitation. At the same time, these regimes caused unprecedented ecological degradation.”⁴³

Lennon contributes to the lineage of Black scholars arguing for a “decolonization” of black bodies in order to facilitate environmental progress.⁴⁴ Lennon ultimately argues, as Nathan Hare contended in his 1970 article, *Black Ecology*, that in order to advance transformative energy politics, we must “decolonize” energy.⁴⁵ Hare had noted that the “real solution to the environmental crisis is the decolonization of the black race[,]” which

³⁷ *Id.* at 8–9.

³⁸ *Id.* at 9.

³⁹ Climate justice and environmental justice activists frequently use the term “frontline communities” to describe communities at the front edge of climate change impacts and fossil-fuel extraction. See, e.g., Wen Stephenson, *These Frontline Communities Know What Climate Justice Would Mean—and They’re Not Seeing it at the UN* (Sept. 24, 2014), THE NATION, <https://www.thenation.com/article/these-front-line-communities-know-what-climate-justice-would-mean-and-theyre-not-seei/>, archived at <https://perma.cc/62CG-XMW2>.

⁴⁰ Myles Lennon, *Decolonizing Energy: Black Lives Matter and Technoscientific Expertise Amid Solar Transitions*, 30 ENERGY RES. & SOC. SCI. 18, 24–25 (2017).

⁴¹ *Id.* at 24.

⁴² *Id.* at 24–25.

⁴³ *Id.*

⁴⁴ See, e.g., Jedediah Purdy, *The Long Environmental Justice Movement*, 44 ECOLOGY L.Q. 809, 830 (2018) (referencing Nathan Hare’s 1970 article, *Black Ecology*, in which he states, “the real solution to the environmental crisis is the decolonization of the black race”).

⁴⁵ Lennon, *supra* note 40, at 25–27.

entails self-determination, self-governance, and a strong budget to facilitate the resolution of Black environmental harms. In Lennon's estimation, the decolonization of energy requires the energy system to be "disentangle[d] . . . from the historically intersecting colonizations of brown bodies and non-human nature."⁴⁶ Further, Lennon notes, "[d]ecolonization operates on the grounds that it is 'inadequate to merely include people of color in untransformed institutions' and that a 'comprehensive *unsettling* of colonial logics and institutions is necessary to bring about change.'⁴⁷

The racist politics that led to the formation of the nation's energy system persist today. The nation still relies on a system of energy production concentrated in areas dense with black and brown bodies. A perverse dynamic exists whereby such black and brown lives also rely on these systems of energy production to support their livelihoods. Their proximity to the sector tracks able-bodied workers into fields reliant on extractive energy systems, thereby rendering these lucky few workers pawns of the same system that has trapped them in unhealthy living conditions. Around the country, it is no surprise that the workers have become the most vociferous advocates of the industries that sicken them and their communities.⁴⁸ This extractive relationship yields the same benefits and results that traditional colonies afforded the colonizer: a colony stripped of political power and voice; a privileged class within the colony that facilitates the work of the colonizer; and an outside world willfully blind to the harm enacted on the colony because it benefits from the goods and services extracted from the colony.

Decolonizing the energy system will be hard work, but it is an essential component of an anti-racist approach to energy policy. Anti-racism, along with anti-oppression, comprise the essence of anti-resilience. Under a decolonized energy system, communities have regained some measure of control of the energy and environmental resources around them. They also have access to economic opportunities outside of the colonizing energy industries within their communities. And endogenous resources—such as local wind and solar energy—form a part of the larger energy system through a community-mediated mechanism that reflects the will of the people impacted by the energy system.

⁴⁶ *Id.* at 26.

⁴⁷ *Id.*

⁴⁸ See Dougherty et al., *Clean Energy and Jobs*, ECON. POL'Y INST. (Feb. 2002), https://www.epi.org/publication/studies_cleanenergyandjobs/, archived at <https://perma.cc/J39K-AT3L> ("Some labor and consumer groups have also raised concerns that [green energy] policies have adverse impacts on low-income households, on workers in particular industries, and on the economy as a whole."); see also Claudia Geib, *Green Energy: Good for the Planet, Bad for Fossil Fuel Workers*, FUTURISM (May 9, 2018), <https://futurism.com/fossil-fuels-community-impacts/>, archived at <https://perma.cc/PD48-L4D5> (highlighting recent Indiana University research that "found that the most vulnerable communities were those places where fossil fuels play a larger role of the economy, as well as places where individuals cannot afford the increased costs of cleaner energy").

Energy policy has the power to facilitate this decolonization; however, the benefits of the current system remain too appealing, too embedded, and seemingly too intractable to advance such a revolutionary transformation. The environmental justice movement, described below, aims to remedy some of the injustice embedded in the energy system; however, as a movement and a field of scholarship, environment justice's focus on remediation of existing harm limits its capacity to truly transform the system. As I explain in Part III, energy policy, particularly in this moment of transition, is aspirational. It therefore traverses a diversity of hopeful terrain that makes it a better site for transformative politics.

B. *Environmental (In)Justice*

As one of the dirtiest counties in the country,⁴⁹ Jefferson County, where Port Arthur is located, produces enough pollutants from plants and other facilities to make it a textbook environmental justice community. The county “ranks in the worst percentile for total environmental releases for increased cancer and other non-cancer health risks, for releases of recognized carcinogen, as well as for developmental and reproductive toxicants.”⁵⁰ County residents face an “added cancer risk from hazardous air pollutants . . . at a rate of 670 parts per million, compared to the overall rate in the state of Texas of 550 parts per million. Even more startling, the ‘added cancer risk in Jefferson County is also 670 times higher than the goal of the Clean Air Act.’”⁵¹

How did this happen in a country with a nearly-fifty year-old Environmental Protection Act and a suite of contemporaneous statutes of nearly the same age promising clean air and water, protection of endangered species, and the safe disposal of toxic substances?⁵² In *The Long Environmental Justice Movement*, Jediah Purdy traces the history of environmentalism in the United States, a movement with an origin story deeply rooted in notions of racial justice and equity, but which, ultimately, jettisoned explicit efforts to address the unequal distribution of environmental harms along racial and class lines.⁵³ This omission, Purdy argues, led to severe consequences “for populations that entered the 1970s burdened by long histories of economic exclusion, and who [at that time] found that formal inclusion [in the econ-

⁴⁹ See Cherry, *supra* note 19, at 132.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² National Environmental Policy Act, 42 U.S.C.A. §§ 4321, 4331–4335, 4341–4347 (2012) (adopted in 1970); Clean Air Act, 42 U.S.C.A. § 7401 et seq. (adopted in 1970); Clean Water Act, 33 U.S.C.A. § 1251 et. seq. (2012) (adopted in 1972); Endangered Species Act 16 U.S.C.A. §§ 1531–1537, 1537a, 1538–1544 (2012) (adopted in 1973); Resource Conservation and Recovery Act, 42 U.S.C.A. § 6962 (2012) (adopted in 1976).

⁵³ Purdy, *supra* note 44, at 835 (noting that the “anti-pollution statutes were, as the environmental justice critique later emphasized, designed without attention to the prospect of their benefits and regulated harms being channeled along lines of economic inequality and persistent racial disadvantage”).

omy through civil rights statutes] did not bring the convergence of economic outcomes that recent decades had encouraged optimistic forecasters to expect.”⁵⁴

The exclusion of distributional concerns within the environmental movement gave rise to the environmental justice movement, a movement concerned with addressing the “environmental racism” embedded in decisions to disproportionately dispose of hazardous wastes in predominantly Black communities.⁵⁵ The movement also concerned itself with redistributing the negative externalities associated with other environmentally harmful industries, such as energy.⁵⁶ A few seminal moments mark the beginning of the movement, such as the 1987 publication of *Toxic Wastes and Race in the United States* by the United Church of Christ Commission for Racial Justice, which placed the idea of environmental justice into the broader political consciousness.⁵⁷ The *Toxic Wastes* report helped launch the movement, but it wasn’t until President Clinton’s 1994 issuance of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, that environmental justice became a concern of the federal government.⁵⁸ The order directs federal agencies to “improve[] methodologies for assessing and mitigating impacts, health effects from multiple and cumulative exposure, collection of data on low-income and minority populations who may be disproportionately at risk, and impacts on subsistence fishers and consumers of wild game[,]” as well as to increase participation by impacted communities in the environmental impact assessment process.⁵⁹

The environmental justice movement can take credit for many successes since its inception in the 1980s and early 1990s, but much work remains. For example, twenty years after the publication of the *Toxic Wastes* report that laid bare “the disproportionate environmental burdens facing people of color and low-income communities across the country” and “sparked a national grassroots environmental justice movement [as well as] significant academic and government attention,”⁶⁰ black and brown communities are still considered dumping grounds for environmental hazards.⁶¹ Despite early strides in the 1990s, the decades since have seen retrenchment by

⁵⁴ *Id.*

⁵⁵ Richard J. Lazarus, *Pursuing “Environmental Justice”: The Distributional Effects of Environmental Protection*, 87 Nw. U. L. Rev. 787, 790 (1993) (referencing use of “environmental racism” to characterize “prevalence of hazardous pollutants” in communities of color).

⁵⁶ *Id.*

⁵⁷ See *Toxic Wastes and Race in the United States*, UNITED CHURCH OF CHRIST: COMMISSION FOR RACIAL JUST., xi (1987), <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>, archived at <https://perma.cc/ETA8-3X5B> (“We believe that this report is of utmost importance, not only to racial and ethnic communities, but also to the nation as a whole.”).

⁵⁸ Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994) (“Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”).

⁵⁹ Bullard et al., *supra* note 25, at 382.

⁶⁰ *Id.* at 371.

⁶¹ *Id.* at 373.

the EPA on issues of environmental justice.⁶² Recent reports investigating the link between communities of color and toxic waste indicate that Blacks are “79 percent more likely than whites to live in neighborhoods where industrial pollution is suspected of posing the greatest health danger[,]” and “in 19 states, blacks were more than twice as likely as whites to live in neighborhoods where air pollution seems to pose the greatest health danger.”⁶³

One might offer that the energy system and its pernicious impacts on the poor and people of color have proven particularly resilient, impervious to a movement. This resilience of inequity and injustice within the energy system illustrates that resilience is not a normative good to which the system should aspire.

C. Unjust Transitions and the Rise of Climate Change Fundamentalism

As society moves to mitigate the existential threat of climate change through the adoption of clean energy resources, energy decision makers appear poised to replicate the power dynamics, structural inequality, and “sacrifice zones” of dirty energy’s past. We are headed for an “unjust” energy transition. This section argues that the urgency of climate change and the calls for resilience to gird against the devastating impacts of climate change events have led to two undesirable outcomes. First, the pressing need for actors at all levels—state, national, and international—to respond to the climate change crisis facilitates the (re)use of development methods that led to disproportionate negative impacts on communities of color and low-income communities. Second, calls for resilience by “climate change fundamentalists”⁶⁴ who argue for an energy transition that is blind to distributive impacts run the risk of masking pre-existing inequality in communities particularly vulnerable to climate change and making it harder to confront that inequality.

Within the climate change movement, funders and activists have aligned along familiar fault lines. The more traditional, well-funded environ-

⁶² See Brady Dennis, *EPA Environmental Justice Leader Resigns Amid White House Plans to Dismantle Program*, WASH. POST, (Mar. 9, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/03/09/epas-environmental-justice-leader-steps-down-amid-white-house-plans-to-dismantle-program/?utm_term=.0e0de066d72d, archived at <https://perma.cc/3J8P-BBQ3>; see also Vann R. Newkirk II, *The EPA’s Failure to Protect People From the Environment*, THE ATLANTIC, (Sept. 30, 2016), <https://www.theatlantic.com/politics/archive/2016/09/epa-civil-rights-environmental-justice-report/502427/>, archived at <https://perma.cc/5YK8-RVEC> (“A quick survey of the environmental-justice concerns and unsustainable complaints around the country since the establishment of the EPA’s Office of Civil Rights in 1993 illustrates either an impossible standard of proof for adjudication or a complete failure on behalf of the agency.”).

⁶³ Bullard et al., *supra* note 25, at 379.

⁶⁴ In this Article, I use the term “climate change fundamentalists” to describe climate change activists who advocate for policies to mitigate and adapt to the impacts of climate change without concern for issues of equity.

mental organizations—the so-called “Big Greens” such as the Environmental Defense Fund, Sierra Club, and Natural Resources Defense Council⁶⁵—have focused on shifting the public’s attention toward the need for urgent action to mitigate the impacts of climate change.⁶⁶ Newer organizations, such as 350.org, have also fallen in line with narratives urging the mitigation of climate change at any cost.⁶⁷ The “urgent action” and “at any cost” climate change narratives crowd out meaningful considerations of who will bear the burden of both the costs of climate change and the impacts of climate change *mitigation* efforts. This dynamic—locating equity concerns at the periphery—mirrors the early dynamic of the environmental movement.

As Purdy chronicles, early environmental activists marginalized notions of distributive justice in the name of protecting the environment.⁶⁸ Purdy attributes this unfortunate outcome to the pervasive view, at the time, that inequality was on the decline and that vulnerable communities, such as communities of color and white rural communities, were no longer burdened by historical exclusion from the market economy.⁶⁹ Environmental law was, therefore, not seen as the place to take up questions of redistributive justice; the formal legal equality afforded to marginalized communities would eventually allow them greater participation in the nation’s economic success, and

⁶⁵ See *Big Green*, SOURCEWATCH, https://www.sourcewatch.org/index.php/Big_Green, archived at <https://perma.cc/L2PC-YLP4> (last edited Oct. 11, 2017) (describing the Big Greens as “heavily-staffed, well-funded non-profit corporations each with budgets in the tens of millions of dollars a year, offices in Washington, D.C. and other major cities, highly paid executive directors, and a staff of lobbyists, analysts, and marketers”); *Infographic: A Field Guide to the U.S. Environmental Movement*, INSIDECLIMATENEWS (Apr. 7, 2014), <https://insideclimatenews.org/news/20140407/infographic-field-guide-us-environmental-movement>, archived at <https://perma.cc/PPH7-BM7G>; see also Jason Mark, *Naomi Klein: ‘Big Green Groups Are More Damaging than Climate Deniers’*, THE GUARDIAN (Sept. 10, 2013), <https://www.theguardian.com/environment/2013/sep/10/naomi-klein-green-groups-climate-deniers>, archived at <https://perma.cc/6B78-JN8H>.

⁶⁶ Adam Aton, *Most Americans Want Climate Change Policies*, SCI. AM.: E&E NEWS (Oct. 3, 2017), <https://www.scientificamerican.com/article/most-americans-want-climate-change-policies/>, archived at <https://perma.cc/2MB2-2UHQ> (citing a poll where “7 in 10 respondents said climate change is happening . . . [and] 61 percent of them—including 43 percent of Republicans—said it’s a problem the government needs to tackle”).

⁶⁷ See *Climate Science Basics*, 350.ORG, <https://350.org/science/>, archived at <https://perma.cc/CF4N-UNME> (last visited July 15, 2018) (“We know exactly what we have to do—keep fossil fuels in the ground and quickly transition to 100% renewable energy.”); see also Bill McKibben, *A World at War*, THE NEW REPUBLIC (Aug. 15, 2016), <https://newrepublic.com/article/135684/declare-war-climate-change-mobilize-wwii>, archived at <https://perma.cc/GB8Z-REWU> (arguing for a mobilization of our entire economy and society to mitigate climate change on a scale comparable to World War I and II).

⁶⁸ Purdy, *supra* note 44, at 814–17.

⁶⁹ *Id.* at 824 (“In the period from roughly 1946 to 1973, high levels of economic growth coincided with a relatively egalitarian distribution of income and wealth, producing the widely shared impression that economic inequality was a problem substantially solved. . . . Certain marginalized populations, signally African Americans and Appalachian whites, were understood to have suffered exclusion from a system of general benefit on account of structural injustice and explicit discrimination, but those who were dealt into the system could expect to share in its benefits.”).

the distributional issues would resolve themselves.⁷⁰ For a number of reasons, Purdy notes, this perspective was misguided, not the least of which was the reality that inequality was actually on the rise in the 1970s, when the seminal environmental statutes were passed, and only increased in the decades to come.⁷¹

Sadly, the current moment within the climate change movement echoes environmentalism's early missteps. Large environmental organizations continue to embrace the energy transition without foregrounding issues of justice, such as project scale, location, or community engagement.⁷² This type of justice-blind approach to the energy transition leaves rural communities, indigenous communities, low-income communities, and politically disempowered communities particularly vulnerable. The new wave of clean energy development poses new threats to communities around the world.

One example of this new reality is Oaxaca, Mexico. The state is Mexico's second poorest⁷³ and home to one of the country's largest populations of indigenous language speakers per capita,⁷⁴ but it is also one of the windiest places in the world, according to the National Renewable Energy Laboratory of the U.S. Department of Energy.⁷⁵ For the past two decades, the rural indigenous communities living in the Isthmus of Tehuantepec region of Oaxaca have witnessed the exponential increase in wind energy development

⁷⁰ *Id.*

⁷¹ *Id.* at 828 (internal citations omitted) (“Moreover, at roughly the time the major environmental laws were passing through Congress with huge majorities, economic inequality began its forty-year increase.”).

⁷² A textual analysis of the public-facing climate and energy policy position statements of the largest environmental organizations in the United States reveals that none of the organizations use the terms “equity, equitable, inequity, inequitable, environmental justice, climate justice, or frontline communities.” The organizations reviewed include Defenders of the Wildlife, Environmental Defense Fund, Greenpeace, National Audubon Society, National Wildlife Federation, Natural Resources Defense Council, The Nature Conservancy, Sierra Club, The Wilderness Society, and the World Wildlife Fund. When expanding the textual analysis to include related concepts, such as “overburdened communities and disproportionate impact,” only three of the large environmental organizations—Greenpeace, Natural Resources Defense Council, and Sierra Club—utilized the terms.

⁷³ Dan Levy et al., *Why is Chiapas Poor?*, HARV. KENNEDY SCH.: CTR. FOR INT'L DEV. 2 (noting that Oaxaca is the second poorest state according to the Mexican National Institute of Statistics and Geography); see also Anahi Rama & Anna Yukhananov, *Mexican Government Says Poverty Rate Rose to 46.2 Percent in 2014*, REUTERS (July 23, 2015), <https://www.reuters.com/article/us-mexico-poverty-idUSKCN0PX2B320150723>, archived at <https://perma.cc/457H-CMB3> (noting that based on 2014 data, “Oaxaca edged out Guerrero to become the second-poorest state, with a [poverty] rate of 66.8 percent.”).

⁷⁴ John P. Schmal, *Indigenous Mexico Statistics: The 2010 Census*, SOMOS PRIMOS (2011), <http://www.somosprimos.com/schmal/mexicancensus.htm>, archived at <https://perma.cc/X7MX-T9D6> (citing 2010 Mexican Census data).

⁷⁵ See Elliott et al., *Wind Energy Resource Atlas of Oaxaca*, NAT'L RENEWABLE ENERGY LABORATORY (Aug. 2003), <https://www.nrel.gov/docs/fy03osti/34519.pdf>, archived at <https://perma.cc/D5LY-BK3V>; see also TETREAU ET AL., SOCIAL ENVIRONMENTAL CONFLICTS IN MEXICO: RESISTANCE TO DISPOSSESSION AND ALTERNATIVES FROM BELOW 89 (2018) (“The wind resources of Oaxaca are among the best in the world. At present, it is the largest wind corridor in Latin America.”).

within their territory.⁷⁶ Deep controversy concerning the methods of development—including contractual and compensatory arrangements and a failure by the government and project developers to adhere to international standards concerning indigenous rights—has accompanied the region’s prolific clean energy development.⁷⁷ Observers note that these development dynamics reflect a dark historical relationship between indigenous communities and mostly European outsiders, who seek to extract wealth and benefits from the land and communities without regard to compensation or human rights.⁷⁸ Since enacting comprehensive energy reform, which opened Mexican markets to private investment for the first time since 1938, Mexico has invested substantial resources in bringing more renewable energy online.⁷⁹ Unfortunately, the rights of indigenous peoples under Mexican law and international environmental law are often seen as delaying progress on the country’s march to impede the impacts of climate change.⁸⁰ Climate change resilience narratives emphasizing the urgent need to mitigate the impacts of climate change exacerbate this false dichotomy.

While it may be true that delaying action on climate change could further harm the vulnerable—indigenous communities, the poor, and communities of color—it would be unfair to mount the energy transition on their already-burdened backs. As climate justice scholars have long noted,⁸¹ these communities did very little to contribute to the existing climate change crisis. Including equity considerations in the early design of energy transition policies could transform these burdened communities for generations. The energy transition offers the opportunity to transform the historical harms visited on vulnerable communities in the name of the fossil fuel energy system, but visiting similar disproportionate harms on these communities in the name of the clean energy transition would only add insult to injury.

In the United States, states with progressive energy policy, such as Hawaii, have fallen into similar patterns of inequality in the name of advancing the clean energy transition. In 2015, Hawaii’s governor signed into law the country’s first 100% renewable portfolio standard (RPS).⁸² Hawaiian law

⁷⁶ Shalanda H. Baker, *Mexican Energy Reform, Climate Change, and Energy Justice in Indigenous Communities*, 56 NAT. RESOURCES J. 369, 381 (2016).

⁷⁷ *Id.* at 370, 384–86.

⁷⁸ *Id.* at 370–74.

⁷⁹ *Id.* at 380–83. Mexico’s energy transition was also designed to unlock vast reserves of as yet unexploited oil and gas, but the clean energy transition receives substantial attention given the country’s early positions on climate change. See *Intended Nationally Determined Contribution*, MÉXICO: GOBIERNO REPÚBLICA (2015), https://www.gob.mx/cms/uploads/attachment/file/162973/2015_indc_ing.pdf, archived at <https://perma.cc/9BGR-UB7C>.

⁸⁰ See Baker, *Mexican Energy Reform*, *supra* note 76, at 377–79.

⁸¹ See generally Maxine Burkett, *Climate Reparations*, 10 MELB. J. INT’L L. 509 (2009) (arguing for reparations for the most vulnerable victims of climate change, given that they are “the least responsible for the crisis”).

⁸² Duane Shimogawa, *Governor Signs Bill Setting Hawaii’s Renewable Energy Goal at 100%*, PAC. BUS. NEWS (June 8, 2015), <https://www.bizjournals.com/pacific/news/2015/06/08/governor-signs-bill-setting-hawaiis-renewable.html>, archived at <https://perma.cc/NJ99-F6YQ>.

provides that, by 2045, the state must obtain 100% of its energy from renewable energy sources.⁸³ Rural and low-income communities already burdened by the state's energy development have raised concerns regarding whether, once again, they will be asked to shoulder the burden of the state's clean energy transition.⁸⁴ Early signs indicate that indeed, low-income communities home to large Native Hawaiian populations and people of color, as well as rural communities, which collectively house the majority of power facilities on the populous Oahu island, will once again be home to new, large-scale clean energy plants owned by corporate interests.⁸⁵ Policymakers and stakeholders who pushed for the 100% RPS ignored its distributive consequences. Embedding equity into the law by providing opportunities for traditionally burdened groups to actively participate as true economic and democratic stakeholders in the state's transition could have unlocked the transformative potential of the state's wholesale adoption of clean energy. Incorporating mechanisms for both procedural justice—through democratic participation in energy project decision-making—and substantive economic justice—through community energy ownership opportunities—in the rollout of the legislation would have enabled the law to redress historical harms in burdened communities and to upend the structural inequality that economically disenfranchises many Native Hawaiian communities.

Resilience narratives often play supporting roles in the foregoing development dramas. Resilience in the popular imagination serves to justify actions to mitigate the impacts of climate change “urgently” and “at any cost.” Big Greens and other climate change fundamentalists use the language of resilience to advance climate and energy tools that are blind to distributive concerns.⁸⁶ In disaster recovery, local leaders vow to adopt cli-

⁸³ H.B. 623, 28th Leg. (Haw. 2015).

⁸⁴ See Brittany Lyte, *In Hawaii, Rooftop Solar Panels Threaten 'Utility Death Spiral'*, ALJAZEERA AM. (Aug. 26, 2015), <http://america.aljazeera.com/articles/2015/8/26/in-hawaii-solar-panels-the.html>, archived at <https://perma.cc/Y698-WW6W>; see also Jennifer Runyon, *Hawaii Takes Historic First Step Toward Creating 'Utility of the Future' Now*, RENEWABLE ENERGY WORLD (Apr. 26, 2018), <https://www.renewableenergyworld.com/articles/2018/04/hawaii-takes-historic-first-step-toward-creating-utility-of-the-future-now.html>, archived at <https://perma.cc/9YYZ-6HYN>.

⁸⁵ See *NRG Energy Breaks Ground on Three Hawaii Solar Projects*, HAWAIIAN ELECTRIC (Jan. 24, 2018), <https://www.hawaiianelectric.com/nrg-energy-breaks-ground-on-three-hawaii-solar-projects>, archived at <https://perma.cc/MN9U-3BQP> (announcing that NRG is developing “three grid-scale solar power projects on the island of Oahu that . . . is the largest block of grid-scale solar power ever installed in Hawaii”); see also Jeff St. John, *Hawaii Utility's 100% Renewable Energy Plan Gets the Green Light*, GREENTECH MEDIA (July 19, 2017), <https://www.greentechmedia.com/articles/read/hawaiian-electric-100-renewable-energy-plan-green-light#gs.wTGdssk>, archived at <https://perma.cc/KUC4-VT8T>.

⁸⁶ See, e.g., *Green & Resilience Banks: How the Green Investment Bank Model Can Play a Role in Scaling Up Climate Finance in Emerging Markets*, NRDC (Nov. 2016), <https://www.nrdc.org/sites/default/files/green-investment-bank-model-emerging-markets-report.pdf>, archived at <https://perma.cc/2F6Q-K4Z7> (describing urgent need to respond to climate change and the use of “Green Investment Banks” as a tool to achieve climate resilience, but failing to discuss in substance the equity considerations surrounding funding climate change projects).

mate change adaptation policies that render communities more resilient.⁸⁷ Finally, communities and individuals seek resilience in order to “bounce back” more quickly from climate change events.⁸⁸ These calls for resilience mask the need to question the ways our current energy system contributes to social and economic inequality, renders communities more vulnerable to the impacts of climate change, and excludes communities from opportunities for economic empowerment. Moreover, resilience is a normative good in popular discourse. When policymakers design resilience-oriented energy policies, they avoid questioning whether the circumstances individuals and communities will be “bouncing back” into are desirable in the first place. The following Part explores narratives of resilience across disciplines and across the dimensions of politics, power, and energy.

II. SCHOLARLY NARRATIVES OF RESILIENCE

Conceptions of resilience find their origins in the groundbreaking work of ecologist C. S. Holling, who argued that ecological systems exist in a state of constant change. Resilience offered a way to conceptualize the amount of change a system can absorb before altogether changing its essential structure and function.⁸⁹ At the time of its publication, Holling’s article, *Resilience and Stability of Ecological Systems*, was inconsistent with the dominant view in the field of ecology that ecological systems themselves exist in a constant state of equilibrium.⁹⁰ Holling argued that change was a fundamental, natural state of any system.⁹¹ Holling’s findings led to great debate within the field concerning resilience and stability, but his work’s most important contribution is the ubiquitous use of the term resilience across disciplines and sub-disciplines.⁹²

In *Genealogies of Resilience*, Jeremy Walker and Melinda Cooper trace the journey of resilience from its initial introduction by Holling in ecology through the fields of “international finance and economic policy, corporate risk analysis, the psychology of trauma, development policy, urban planning,

⁸⁷ See, e.g., *Funding the Future: Resilience Planning Across Public and Private Sectors*, SIERRA CLUB N.Y.C. (June 7, 2018), <http://nyc.sierraclub.org/?event=funding-the-future-resilience-planning-across-public-and-private-sectors>, archived at <https://perma.cc/XLP4-YBJL>.

⁸⁸ The “bounce back” narrative is ubiquitous after major weather events. See, e.g., Editorial, *7 Things That Can Help Hurricane Harvey Victims Bounce Back*, DALL. MORNING NEWS (Sept. 1, 2017), <https://www.dallasnews.com/opinion/editorials/2017/09/01/7-things-can-help-harveys-victims-bounce-back>, archived at <https://perma.cc/XV9Y-9ZC2>; Andrew Revkin, *After Hurricane Harvey: Rethinking the ‘Infrastructure’ Discussion Amid a Blitz of Hurricanes*, PROPUBLICA (Sept. 13, 2017), <https://www.propublica.org/article/rethinking-the-infrastructure-discussion-amid-a-blitz-of-hurricanes>, archived at <https://perma.cc/7ZXN-9RPL>.

⁸⁹ C. S. Holling, *Resilience and Stability of Ecological Systems*, 4 ANN. REV. ECOLOGY & SYSTEMATICS 1 (1973).

⁹⁰ Donald R. Nelson et al., *Adaptation to Environmental Change: Contributions of a Resilience Framework*, 32 ANN. REV. ENV’T. & RESOURCES 395, 398 (2007).

⁹¹ *Id.*

⁹² Carl Folke, *Resilience: The Emergence of a Perspective for Social-Ecological Systems Analyses*, 16 GLOBAL ENVTL. CHANGE 253, 267 (2006).

public health and national security ecology, social-ecology, and ultimately, social sciences.”⁹³ The term has seeped into nearly every discipline as well as the popular imagination. As Katrina Brown notes, in *Global Environmental Change I: A Social Turn for Resilience?*, in “January 2013 *Time* magazine declared ‘resilience’ the buzzword of 2013.”⁹⁴ She continues, “[resilience] it seems, is now everywhere, permeating scientific and popular debates[,]” and “[i]n the wake of a sudden event or disaster we witness calls for increased resilience, or narratives about how resilient people and communities are, or perhaps how resilient ecosystems are or nature itself is in the wake of disturbance.”⁹⁵ As Brown further notes, “resilience ideas are powerful,” but also “highly contested.”⁹⁶ The following sections outline a few of the areas of use within the fields relevant to this Article and highlight areas of contention.

A. *Resilience as it Relates to Politics and Power*

It is perhaps unsurprising that a term born of the so-called hard sciences, where the focus on data-driven hypotheses can obfuscate the subtleties of human experiences within a complex society, suffers the most effective critiques from those whose work focuses on power and structural inequality.⁹⁷ A common critique of resilience is that “resilience fails to take account of politics and power relations.”⁹⁸ MacKinnon and Derickson note that the conceptual underpinnings of resilience are inherently conservative in the social context, and “[t]his apolitical ecology not only privileges established social structures, which are often shaped by unequal power relations and injustice . . . but also closes off wider questions of progressive social change which require interference with, and transformation of, established ‘systems.’”⁹⁹ As Katrina Brown recounts, critiques of resilience could be summarized as follows:

First, there is the failure to recognize resilience as socially contingent, rarely addressing the questions of ‘resilience for whom?’; second, its mainstream usage is conservative, focused on the persistence of a ‘system’; third, it focuses on a system which is dis-

⁹³ Jeremy Walker & Melinda Cooper, *Genealogies of Resilience: From Systems Ecology to the Political Economy of Crisis Adaptation*, 42 SECURITY DIALOGUE 143, 143 (2011).

⁹⁴ Brown, *supra* note 8, at 107.

⁹⁵ *Id.*

⁹⁶ *Id.* at 108.

⁹⁷ *Id.* at 109 (“The transference of ideas about ecological systems to the social realm is viewed as highly problematic.”).

⁹⁸ *Id.*

⁹⁹ Danny MacKinnon & Kate Driscoll Derickson, *From Resilience to Resourcefulness: A Critique of Resilience Policy and Activism*, 37 PROGRESS HUM. GEOGRAPHY 253, 254 (2013).

turbed by external or exogenous forces, so it underplays the internal, endogenous and social dynamics of the system.¹⁰⁰

The rich, expanding, and cross-disciplinary body of scholarship addressing resilience includes an emerging thread suggesting that resilience could also incorporate principles of transformation and community empowerment,¹⁰¹ but debate as to whether resilience remains conceptually distinct from transformation persists.¹⁰² Moreover, as Brown notes, “there is no single agreed definition or understanding of transformation, and many normative assumptions abound, not least about the assumed desirability of transformational change—echoing normative stances on resilience.”¹⁰³ Communities have also begun to use resilience as a foil for “regressive and neoliberal agendas” and as “an organizing principle to design and shape alternative futures.”¹⁰⁴ Despite these moves toward utilizing resilience framing as a progressive tool for transformation,¹⁰⁵ the social science scholarship remains divided over the definition, implementation, and underlying normative implications of the term.¹⁰⁶ This Article borrows from this dense debate and aligns with more recent efforts to connect resilience with notions of transformation. This Article further suggests that, in legal scholarship, particularly in discourses explicitly committed to justice and equality, we should question the norms embedded in resilience.

B. Resilience in Legal Discourse

The field of law has not escaped the allure of resilience. Like sustainability, the use of the term has proliferated in environmental law literature. In particular, legal scholars interested in adaptive management—the use of legal structures to manage complex ecosystems undergoing change—frequently use resilience theory to describe approaches to adaptive management.¹⁰⁷

Scholars who write most extensively in the realm of adaptive management, such as J.B. Ruhl,¹⁰⁸ Alex Camacho,¹⁰⁹ and Robin Kundis Craig,¹¹⁰ use traditional notions of resilience as found in ecological systems literature, ar-

¹⁰⁰ Brown, *supra* note 8, at 109.

¹⁰¹ Davidson et al., *supra* note 4, at 3.

¹⁰² Brown, *supra* note 8, at 113–14.

¹⁰³ *Id.* at 113.

¹⁰⁴ *Id.*

¹⁰⁵ Davidson et al., *supra* note 4, at 8 (“Type 3, or ‘transformative resilience,’ incorporates some elements from Type 1 and both unique Type 2 elements, but transformability is the element that clearly distinguishes this type.”).

¹⁰⁶ Brown, *supra* note 8, at 113–14.

¹⁰⁷ See, e.g., Robin Kundis Craig & J. B. Ruhl, *Designing Administrative Law for Adaptive Management*, 67 VAND. L. REV. 1 (2014).

¹⁰⁸ See generally *id.*; J. B. Ruhl, *Regulation by Adaptive Management – Is it Possible?*, 7 MINN. J. L. SCI. & TECH. 21 (2005).

¹⁰⁹ See generally Camacho et al., *A Critical Assessment of Collaborative Adaptive Management in Practice*, 49 J. APPLIED ECOLOGY 47 (2012).

guing that law itself must become more flexible to adapt to the rapidly changing environment.¹¹¹ In suggesting that law can help to facilitate ecological resilience, they do not concern themselves with the underlying normative social justice implications of resilience. Rather, they suggest that law should reflect the environment it is meant to protect and adopt characteristics of flexibility. This Article departs from these discussions of resilience. I explicitly argue that, with respect to energy policy, resilience thinking does not allow for full consideration of structural inequality or provide adequate space to transform the conditions of inequality.

C. *Energy Justice and its Treatment of Resilience*

Climate and energy justice, subfields of environmental law, make use of resilience in less explicit ways than in adaptive management literature. Climate justice discourse concerns itself primarily with how law can respond to the unique vulnerabilities of poor communities, communities of color, and communities in the Global South with respect to climate change.¹¹² In many ways, climate justice does some of the aspirational work of creating a level playing field for marginalized communities, as leading scholars in the field go as far as arguing that communities that have contributed little to the problem of climate change should receive a form of reparations from counterparts in the Global North in order to support climate change adaptation efforts in these communities.¹¹³ This critique of the status quo implicitly challenges norms of resilience; however, climate change adaptation, as a physical manifestation of policy, imports its own norms of resilience rather than transformation. Adaptation, a close cousin of resilience, faces justice-based limitations similar to resilience.¹¹⁴ For example, where resilience might be defined as “the amount of change a system can undergo and still

¹¹⁰ See generally Robin Kundis Craig et al., *Balancing Stability and Flexibility in Adaptive Governance: An Analysis of Tools Available in U.S. Environmental Law*, 22 *ECOLOGY & SOC’Y* 1 (2017); Robin Kundis Craig, “Stationarity is Dead” – Long Live Transformation: Five Principles For Climate Change Adaptation Law, 34 *HARV. ENVTL. L. REV.* 9 (2010).

¹¹¹ Craig et al., *Stationarity*, *supra* note 110, at 9.

¹¹² See, e.g., RANDALL S. ABATE, *CLIMATE JUSTICE: CASE STUDIES IN GLOBAL AND REGIONAL GOVERNANCE CHALLENGES* xxxiii–xv (2016); SUMUDU ATAPATTU, *HUMAN RIGHTS APPROACHES TO CLIMATE CHANGE: CHALLENGES AND OPPORTUNITIES* 154–217 (2015); Maxine Burkett, *Climate Justice and the Elusive Climate Tort*, 121 *YALE L.J. ONLINE* 115, 115 (2011), <https://www.yalelawjournal.org/forum/climate-justice-and-the-elusive-climate-tort>, archived at <https://perma.cc/N76Z-GM4J>; Maxine Burkett, *A Justice Paradox: On Climate Change, Small Island Developing States, and the Quest for Effective Legal Remedy*, 35 *U. HAW. L. REV.* 633, 668–70 (2013); Carmen Gonzalez, *Environmental Justice, Human Rights, and the Global South*, 13 *SANTA CLARA J. INT’L L.* 151, 153 (2015); Maxine Burkett, *Climate Justice, Climate Change Discourse, and the Failure of the Elite-Driven Democracy: A Think Piece*, *AM. STUDIES INST.* 2 (Seoul National University) (2010).

¹¹³ ATAPATTU, *supra* note 112, at 279–80; Burkett, *supra* note 81, at 526–28.

¹¹⁴ JOEL WAINWRIGHT & GEOFF MANN, *CLIMATE LEVIATHAN: A POLITICAL THEORY OF OUR PLANETARY FUTURE* 71–78 (2018) (arguing that blanket use of “adaptation” discourse obfuscates politics of climate change).

retain the same function and structure while maintaining options to develop” and adaptation as “the decision-making process and the set of actions undertaken to maintain the capacity to deal with current or future predicted change,”¹¹⁵ within each conceptual framework, the underlying circumstances that require either resilience or adaptation remain undisturbed. Undergirding the pervasive use of resilience and adaptation in the climate change space is the premise that climate change disruption is inevitable and that communities should protect themselves against it.¹¹⁶

Benjamin K. Sovacool and Michael H. Dworkin’s early work on energy justice defines energy justice as a mechanism to achieve procedural and distributive justice.¹¹⁷ Although energy justice concerns itself with the distribution of energy “goods and bads,” missing from Sovacool and Dworkin’s early work is an explicitly transformative politics that completely upends the features of the energy system that perpetuate injustice and inequality.¹¹⁸ Moreover, energy justice remains rather ahistorical and focused on remediation of harm at the margins, rather than utilizing energy policy as an equity-based tool of empowerment and system transformation.¹¹⁹

It is easy to understand why scholars of energy policy, and even energy justice, might fall into intellectual traps that fail to address the need for energy system transformation. In some ways, the ubiquity of the energy system facilitates this blind spot, leading to the invisibility of its most unequal and damaging features. The changes to the energy system then manifest as a series of necessary technical changes required to facilitate the transition away from fossil fuels, rather than structural changes that disrupt the ways that the system itself operates to harm people of color and low-income communities.¹²⁰ Moreover, studies examining climate change policy note that “applications of resilience in the field of climate change and development overwhelmingly support the status quo and promote ‘business as usual.’”¹²¹

¹¹⁵ Nelson et al., *supra* note 90, at 396.

¹¹⁶ See MacKinnon & Derickson, *supra* note 99, at 259 (citations omitted) (“The effect is to naturalize crisis, resonating with neoliberal discourses which stress the inevitability of globalization.”).

¹¹⁷ Benjamin K. Sovacool & Michael H. Dworkin, *Energy Justice: Conceptual Insights and Practical Applications*, 142 APPLIED ENERGY 435, 435–36 (2015).

¹¹⁸ *Id.* at 441; see also BENJAMIN SOVACOO & MICHAEL H. DWORKIN, GLOBAL ENERGY JUSTICE: PROBLEMS, PRINCIPLES, AND PRACTICES (2014).

¹¹⁹ Sovacool & Dworkin, *supra* note 117, at 441; see also SOVACOO & DWORKIN, GLOBAL ENERGY JUSTICE, *supra* note 118.

¹²⁰ Cf. Adrian Smith et al., *The Governance of Sustainable Socio-Technical Transitions*, 34 RES. POL’Y 1491 (2005); Frank W. Geels, *Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective*, 39 RES. POL’Y 495 (2010); Adrian Smith & Andy Stirling, *Social-Ecological Resilience and Socio-Technical Transitions: Critical Issues for Sustainability Governance*, STEPS (2008), <https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/2438/Social-ecological%20resilience...pdf?sequence=1&isAllowed=y>, archived at <https://perma.cc/BDK3-9SMV>; Frank W. Geels, *A Socio-Technical Analysis of Low-Carbon Transitions: Introducing the Multi-Level Perspective into Transport Studies*, 24 J. TRANSPORT GEOGRAPHY 471 (2012).

¹²¹ Brown, *supra* note 8, at 110.

I, too, have fallen into linguistic traps that limit pathways for transformation. Discussing energy justice, I have argued that energy policy can also help render communities less vulnerable and “more resilient in the face of climate change,” instead of critiquing the underlying circumstances that create vulnerability in the first instance.¹²² This Article aligns itself with the existing energy justice movement¹²³ and literature,¹²⁴ but advances a transformative politics that requires more than marginal technical fixes to the existing system to make the system more resilient. This Article argues explicitly against resilience in as much as the system itself survives intact and instead makes an explicit call for total system transformation.

The next Part discusses how conceptual notions of resilience manifest within energy policy.

III. RESILIENCE AS REFLECTED IN ENERGY POLICY

Resilience is embedded within our energy system. It is explicit. The current configuration of the energy system requires set infrastructure and fixed facilities for power generation. The coal-fired power plants, oil refineries, and oil and gas wells that dot the landscape all comprise a part of this infrastructure, as do the pipelines, transmission and power lines that crisscross the nation and deliver power to residents and businesses. This system requires a measure of resilience to withstand electricity loads, demands on supply, and major weather events.

Resilience is also implicit within the design of the current energy system. The statutes governing the creation of utilities generally provide that utilities shall deliver power that is affordable and reliable, implying that the system must be able to resist, or bounce back from, destabilizing events.¹²⁵ While stability and reliability are hallmarks of the American power system, other hallmarks include unequal access due to the high cost of electricity;¹²⁶ negative externalities such as poor air and water quality that disproportion-

¹²² SHALANDA H. BAKER, THE ENERGY JUSTICE STAKES EMBEDDED IN THE NET ENERGY METERING POLICY DEBATES (forthcoming 2018) (manuscript at 3) (on file with journal).

¹²³ See, e.g., Matthew J. Burke & Jennie C. Stephens, *Energy Democracy: Goals and Policy Instruments for Sociotechnical Transitions*, 33 ENERGY RES. & SOC. SCI. 35 (2017).

¹²⁴ See, e.g., BENJAMIN K. SOVACOO, ENERGY AND ETHICS: JUSTICE AND THE GLOBAL ENERGY CHALLENGE (2013); BENJAMIN K. SOVACOO ET AL., ENERGY SECURITY, EQUALITY AND JUSTICE (2013); SOVACOO & DWORKIN, GLOBAL ENERGY JUSTICE, *supra* note 118; Raphael J. Heffron & Darren McCauley, *Achieving Sustainable Supply Chains Through Energy Justice*, 123 APPLIED ENERGY 435 (2014); Raphael J. Heffron et al., *Resolving Society's Energy Trilemma Through the Energy Justice Metric*, 87 ENERGY POL'Y 168 (2015); Kirsten Jenkins et al., *Energy Justice: A Conceptual Review*, 11 ENERGY RES. & SOC. SCI. 174 (2016); Darren McCauley et al., *Advancing Energy Justice: The Triumvirate of Tenets*, 32 INT'L ENERGY L. REV. 107 (2013); Sovacool & Dworkin, *Energy Justice*, *supra* note 117.

¹²⁵ William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1643 (2014).

¹²⁶ Shelley Welton, *Clean Electrification*, 88 U. COLO. L. REV. 571, 573–76, 630–33 (2017).

ately impact poor communities and communities of color;¹²⁷ and centralized economic power's control of the grid.¹²⁸ This embedded resilience concretizes both positive attributes, such as reliability, and negative attributes, such as inequality. Deploying resilience principles broadly across energy policy obfuscates the negative attributes.

This Part delves into the implicit and explicit ways in which resilience weaves itself into energy policies—such as rooftop solar and community energy—focused on the transition away from fossil fuels. This Part makes the case that these transitional policies provide an opportunity to disrupt the particularly devastating aspects of the energy system that lead to disproportionate impacts on the poor and communities of color, but that, as proposed, many of these transitional energy policies remain wedded to a system that perpetuates structural inequality. As Fairchild and Weinrub note,

[s]imply decarbonizing the current economic system—hard as this might be—by transitioning to a nonfossil, renewable energy base does not challenge the fundamental logic or economic power relationships of this extractive global economy. It does not impact the growth imperative of the capitalist system nor stop Wall Street and the largest U.S. corporations from extracting wealth from working people. It does not address income and wealth inequality. Decarbonizing this economic system extends its life We cannot build a new economy on an old energy model.¹²⁹

Transformative change requires a new framing beyond the implicit and explicit resilience embedded in the current energy system. It also requires that energy policy facilitate the participation of poor people and people of color in the design, function, and ownership of the new system. Parts III.A and III.B respectively discuss net energy metering policy and community energy policy, which hold great potential for transformation of the energy system but, as currently designed, simply offer transitional frameworks on top of the existing unequal energy system. Part III.C discusses the efforts to

¹²⁷ Douglas Fischer, *Climate Change Hits Poor Hardest in U.S.*, SCI. AM., (May 2009), <https://www.scientificamerican.com/article/climate-change-hits-poor-hardest/>, archived at <https://perma.cc/9UK3-YD8Q> (quoting Rachel Morello-Frosch, “Climate change does not affect everyone equally in the United States. . . . People of color and the poor will be hurt the most.”); Rachel Morello-Frosch, *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap*, USC PROGRAM FOR ENVTL. & REGIONAL EQUITY (May 2009), https://dornsife.usc.edu/assets/sites/242/docs/ClimateGapReport_full_report_web.pdf, archived at <https://perma.cc/84UZ-XEK7>; see also U.N. Framework Convention on Climate Change, *Developing Countries Need Urgent Support to Adapt to Climate Change*, UNFCCC, <https://unfccc.int/news/developing-countries-need-urgent-support-to-adapt-to-climate-change>, archived at <https://perma.cc/7TRZ-JD5V> (noting that the IMF’s October 2017 World Economic Outlook Report predicts that “developing countries will suffer disproportionately from rise in temperatures since they are situated in relatively hot climates. Within developing countries, the poor would likely be the most heavily affected by climate change.”).

¹²⁸ Boyd, *supra* note 125, at 1643.

¹²⁹ ENERGY DEMOCRACY, *supra* note 34, at 11.

address the resilience of the energy system at the federal level. The section illustrates just how far the national conversation concerning energy policy is from reckoning with the deep inequities of the energy system. Energy policy approaches focus on resilience of the fuel supply rather than on opportunities to incentivize energy solutions that reduce burdens on communities impacted by the existing system.

A. *The Battle Over Net Energy Metering Policy: A Missed Opportunity for System Transformation*

I begin my discussion of the implicit ways resilience is embedded within energy policy with net energy metering, not only because the domestic U.S. policy space surrounding net energy metering is among the most contested policy spaces within the current renewable energy transition,¹³⁰ but also because it is one of the most high-stakes areas.¹³¹ Rooftop solar programs, facilitated by net energy metering policies that provide economic incentives to solar customers for producing solar energy, have the potential to fundamentally change the relationship between the customer and the utility and economically empower the poor.¹³² The contestation surrounding net energy metering reveals a fundamental resistance to restructuring and transforming the energy system along more equitable lines.

The various iterations of net energy metering, also referred to as NEM, around the country take many forms; however, the simplest way to think of NEM is as the receipt of a credit on one's electricity bill in exchange for generating electricity.¹³³ States designed early NEM programs to incentivize greater adoption of renewable energy.¹³⁴ In the early days of NEM, owners of solar panels or other forms of distributed energy generation¹³⁵ received a credit for generating electricity from their distributed generation system.¹³⁶ Generally, this credit was the retail rate: generators of rooftop-solar energy received compensation for the energy produced at the same rate utility companies charge electricity customers for their electricity.¹³⁷

Implicitly, the incentive structure built into the majority of NEM legislation framed NEM as transitional rather than transformational. Legislatures

¹³⁰ See Welton, *supra* note 126, at 592–97.

¹³¹ See BAKER, *supra* note 122, at 5.

¹³² See *id.*

¹³³ See *id.* at 6–7; Lincoln L. Davies, *Making Sense of the Rapidly Evolving Legal Landscape of Solar Energy Support Regimes*, 6 KLRI J.L. & LEGIS. 81, 92 (2016).

¹³⁴ See BAKER, *supra* note 122, at 6–7; Davies, *supra* note 133, at 92; cf. Shalanda H. Baker, *Unlocking the Energy Commons: Expanding Community Energy Generation*, in *LAW AND POLICY FOR A NEW ECONOMY – SUSTAINABLE, JUST, AND DEMOCRATIC* 211, 213–14 (Melissa K. Scanlan ed., 2017).

¹³⁵ In general, energy sources are “distributed” when spread out over a power grid, versus generated in a centralized energy facility.

¹³⁶ See BAKER, *supra* note 122, at 7.

¹³⁷ See BAKER, *supra* note 122, at 7–8; Davies, *supra* note 133, at 93.

introduced NEM programs as a way to gradually bring more renewable energy into the system, but with the understanding that the system, reliant on centralized energy generation that is owned and operated by investor-owned utilities or corporate entities, would essentially remain intact. Few could have predicted the precipitous drop in the price of rooftop solar panels since the introduction of NEM. Cheaper solar panels have incentivized more participation in NEM for those able to participate, typically homeowners and business owners. As a result, energy customers have become more active participants in the ownership and control of their energy resources, disrupting a core feature of the energy system: the relationship between the customer and utility.

In general, investor-owned utilities make money by selling electricity as well as receiving a reasonable return on investing in energy infrastructure. The shift from electricity sold by the utility to customer-generated energy poses a threat to the utility business model, and the success of NEM led to its eventual undoing. In October 2015, Hawaii, a state with the highest penetration of rooftop solar, became the first state in the country to end its net metering program.¹³⁸ After Hawaii's departure from the program, Nevada ended (and then, facing public pressure,¹³⁹ reinstated) its program.¹⁴⁰ Twenty-five states, plus the District of Columbia, are currently debating the current and future design of programs aimed at compensating electricity customers for self-generated electricity.¹⁴¹ The key question in these debates is the rate at which program participants should be compensated, with utilities arguing for lower compensation rates and solar companies and rooftop solar adopters arguing for retail rate compensation.¹⁴² This debate has significant implications for low-income communities and communities of color long impacted by the structure of the nation's energy system. First, ending NEM programs could lead to the construction of "utility-scale" facilities¹⁴³ in burdened envi-

¹³⁸ See BAKER, *supra* note 122, at 19; HAW. PUB. UTILS. COMM'N, ORDER NO. 33258: INSTITUTING A PROCEEDING TO INVESTIGATE DISTRIBUTED ENERGY RESOURCE POLICIES (2015), <http://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15J13B15422F90464>, archived at <https://perma.cc/X76V-S77G>.

¹³⁹ See Julia Pyper, *Nevada Legislature Passes Bill to Restore Net Metering for Rooftop Solar*, GREENTECH MEDIA (June 5, 2017), <https://www.greentechmedia.com/articles/read/nevada-bill-to-restore-net-metering-for-rooftop-solar-passes-in-the-senate#gs.4X682f4>, archived at <https://perma.cc/8PNT-NR9C>.

¹⁴⁰ See BAKER, *supra* note 122, at 6; Julia Pyper, *Nevada PUC Approves Net Metering Rules Expected to Reboot the State's Rooftop Solar Industry*, GREENTECH MEDIA (Sept. 5, 2017), <https://www.greentechmedia.com/articles/read/nevada-puc-approves-net-metering-rules-expected-to-reboot-the-rooftop-solar#gs.pr3mocM>, archived at <https://perma.cc/N558-G5YK>.

¹⁴¹ See Autumn Proudlove et al., *The 50 States of Solar: Q1 2018 Quarterly Report*, N.C. CLEAN ENERGY TECH. CTR. 5 (Apr. 2018), https://nccleantech.ncsu.edu/wp-content/uploads/Q1-18_SolarExecSummary_Final.pdf, archived at <https://perma.cc/D6EG-LD3P>.

¹⁴² See BAKER, *supra* note 122, at 11, 28.

¹⁴³ Utility-scale power generation refers to a range of energy facilities that supply power to the grid. The size of the project could be as low as one megawatt, see K.K. DuVivier and Thomas Witt, *NIMBY to NOPE - or YESS?*, 38 *Cardozo L. Rev.* 1453, 1466 n.60 (2017) (noting utility-scale wind projects, as defined by the U.S. Department of Energy have capacity

ronmental justice communities; and second, ending NEM will limit the economic opportunities for low-to-moderate-income communities that would come with participation in rooftop solar. These outcomes could make the clean energy transition yet another mechanism for industrializing vulnerable communities and stifling their opportunities to participate in the economic benefits of the energy transition.

As the rapidly decreasing cost of solar panels has made ownership of solar panels a possibility for broader portions of the population, utility companies have used a string of tactics, rooted in resilience thinking, to resist solar adoption.¹⁴⁴ First, utility companies argue that the increased adoption of rooftop solar will eventually destabilize the utility industry and lead to a so-called “utility death spiral,” wherein fewer and fewer customers serve as the rate base to pay utility companies’ fixed costs for grid maintenance.¹⁴⁵ A second, related, argument frequently deployed by utilities is that, with increased adoption of rooftop solar panels by affluent utility customers, low-income customers will be left to pay more of the costs associated with maintaining the electric grid.¹⁴⁶ A third argument relates to grid stability.¹⁴⁷ Utilities argue that electricity grids are simply not designed to accommodate the large outflow of electricity from homes; rather, the grid is designed to send electricity into homes.¹⁴⁸ This triad of arguments has been deployed effectively around the country to stall the adoption of NEM legislation as well as prompt regulators to consider curtailing or modifying existing NEM programs.¹⁴⁹ If these arguments continue to prevail, the energy system, even amidst a transition of resources, will remain resilient: Low-to moderate-income communities will continue to face disproportionate burdens due to high energy costs and infrastructure siting; utility companies will maintain economic and physical control of the energy system; and the gap between the poor and early, more affluent adopters of rooftop solar systems will continue to grow.

The original policies creating NEM failed to center equity concerns or the concerns of people of color. And, perhaps unintentionally, the current debates surrounding NEM implicitly embed a brand of resilience that threatens to reify environmental and economic inequality. Increased penetration of rooftop solar, especially among the less affluent, can only help to decarbonize the grid in ways that will reduce the burden on communities of color.

greater than one megawatt); but are “typically defined as those ten megawatts or larger.” U.S. Department of Energy, *Renewable Energy: Utility-Scale Policies and Programs*, <https://www.energy.gov/eere/slsc/renewable-energy-utility-scale-policies-and-programs>, archived at <https://perma.cc/SFF8-8GE6>.

¹⁴⁴ See BAKER, *supra* note 122, at 16, 19, 21, 23–25.

¹⁴⁵ See *id.* at 9; see also Boyd, *supra* note 125, at 1676 (discussing utility death spiral).

¹⁴⁶ See BAKER, *supra* note 122, at 21; Baker, *Unlocking the Energy Commons*, *supra* note 134, at 215.

¹⁴⁷ See BAKER, *supra* note 122, at 9–10, 16, 29.

¹⁴⁸ See *id.* at 9–10, 15–16; Welton, *supra* note 126, at 611–17 (2017).

¹⁴⁹ See BAKER, *supra* note 122, at 19.

Distributed generation, such as rooftop solar, provides pathways to clean energy generation in lieu of the large, utility-scale energy generation frequently found in low-income and rural communities. Moreover, increasing access to net metering programs for low-to moderate-income families can offer much-needed assistance to pay electricity bills, particularly given that low-to-moderate-income families spend greater proportions of their income on utilities.¹⁵⁰ Finally, a number of recent studies indicate that, viewed over a longer time horizon, distributed energy can introduce long-term environmental benefits to the grid related to reduced burning of fossil fuels.¹⁵¹ Given the disparate impacts of fossil fuels on low income communities of color, communities of color could argue that, in the aggregate and over the long-term, NEM is good energy policy (and good health policy) and its implementation should be increased.¹⁵²

The promise of NEM is disruptive and transformational. It offers individuals the opportunity to own their own electricity generation and receive economic benefits by exporting the electricity into the larger grid. While NEM changes the relationship between customer and utility, regulators should see this as an opportunity to create different incentives and models to advance technological changes within the energy industry. In order to facilitate the transition and incentivize clean technology without replicating the harms of the old system, successor policies must grapple with the distributive impacts of the existing system and center the concerns of the poor and people of color in policy design. One way to do this might mirror current approaches to the legalization of marijuana around the country. In recognition of the disproportionate impact the war on drugs has had on communities of color, states engaged in legalization efforts have sought creative ways to place impacted communities at the front of the line to receive the benefits of marijuana legalization.¹⁵³

Embedded notions of resilience create blind spots that limit the possibility for NEM to transform the environmental and economic circumstances of poor communities and communities of color. This implicit incorporation

¹⁵⁰ See *id.* at 4 (citing Adam Chandler, *Where the Poor Pay More Than 10 Percent Of Their Income on Energy*, THE ATLANTIC (June 8, 2016), <https://www.theatlantic.com/business/archive/2016/06/energy-poverty-low-income-households/486197/>, archived at <https://perma.cc/E694-2C6J>; Dan Boyce & Jordan Wirfs-Brock, *High Utility Costs Force Hard Decisions For The Poor*, INSIDE ENERGY (May 8, 2016), <http://insideenergy.org/2016/05/08/high-utility-costs-force-hard-decisions-for-the-poor>, archived at <https://perma.cc/PMR6-8FF5>).

¹⁵¹ See GALEN BARBOSE, LAWRENCE BERKELEY NAT'L LAB., PUTTING THE POTENTIAL RATE IMPACTS OF DISTRIBUTED SOLAR INTO CONTEXT 8–10 (2017), <https://emp.lbl.gov/sites/default/files/lbnl-1007060.pdf>, archived at <https://perma.cc/VW9S-PRX6>.

¹⁵² See BAKER, *supra* note 122, at 22–23.

¹⁵³ See, e.g., Sameer Rao, *4/20 Special: How Advocates and Entrepreneurs of Color are Fighting for Equity in the Legal Weed Business*, COLORLINES (Apr. 20, 2018), <https://www.colorlines.com/articles/420-special-how-advocates-and-entrepreneurs-color-are-fighting-equity-legal-weed-business>, archived at <https://perma.cc/YVA5-LZBB> (discussing Massachusetts Question 4, which legalized marijuana in the state in 2016 and called for equity to address harms to communities of color).

of resilience is not unique to the debates around NEM policies. Community energy policies serve as another site of implicit resilience.

B. Community Energy Policy: Another Missed Opportunity for System Transformation

Community energy models allow those who are unable or unwilling to participate in NEM programs to receive the benefits of distributed clean energy generation by participating in an energy project that is located away from their residence.¹⁵⁴ A project may be located within or outside of the community that it benefits. Currently, sixteen states and the District of Columbia have some form of community energy legislation.¹⁵⁵ Initially, the programs were seen as a way for low-to-moderate-income communities, renters, and those unable to afford the up-front cost of solar panels to participate in distributed energy generation.¹⁵⁶ Advocates for the poor and social justice proponents also saw community energy as a mechanism to alleviate poverty, while giving individuals the same type of control over their electricity that rooftop solar program participants enjoy.¹⁵⁷ Such benefits would have fundamentally shifted the relationship of many low-income communities to their energy source and laid a foundation for economic empowerment. The dominant approaches to community energy, however, fall short of these aspirations and continue to target more affluent energy users. In this way, community energy policies implicitly incorporate a resilience frame rather than a transformative frame and as a result, the unequal aspects of the energy system remain undisturbed.¹⁵⁸

Community energy programs take multiple forms, but the most common approach allows participants to purchase a share in a power facility and receive a credit on their electricity bill based on the amount of share they have purchased.¹⁵⁹ Project developers and solar companies serve as the middlemen, mediating the relationship between the customer and utility. Project developers own and manage projects, typically charging participants a minimum fee to “buy-in” to the project. The compensation rate community solar participants receive for electricity generated by community solar projects

¹⁵⁴ See Hannah J. Wiseman & Sara C. Bronin, *Community-Scale Renewable Energy*, 4 SAN DIEGO J. CLIMATE & ENERGY L. 165, 165–66 (2012) (“community-scale renewable energy: mid-sized energy sources supported by resources pooled from several private parties in close geographic proximity”).

¹⁵⁵ See *Community Energy Projects*, SHARED RENEWABLES HQ, <http://www.sharedrenewables.org/community-energy-projects/>, archived at <https://perma.cc/CCE3-DTAP>.

¹⁵⁶ See Baker, *Unlocking the Energy Commons*, *supra* note 134, at 216.

¹⁵⁷ See *id.* at 215–16 (noting the potential of community energy programs to offer low and moderate-income utility customers the opportunity to generate renewable energy).

¹⁵⁸ See *id.*

¹⁵⁹ See *id.* at 216–17.

varies, and in many cases it may be less than the electricity retail rate.¹⁶⁰ This stands in contrast to the retail rate of exchange intended to give community members benefits comparable to those afforded to more affluent early NEM participants; however, for a number of reasons the differences in implementation of the two programs is stark. First, participants in community energy programs generally lack an ownership interest in the community energy project.¹⁶¹ Second, community energy participants lack true control over the energy they produce. For example, the share purchased by individual participants in community energy projects is typically capped to reflect the user's electricity usage profile, which effectively limits the individual's ability to sell energy back into the grid and turn their individual electricity meter "backward."¹⁶² The true economic benefits of community energy flow to project developers, who have control over excess energy produced by the project.

For several reasons, community energy programs, as implemented, have failed to transform the socio-economic conditions of low- to moderate-income utility customers. First, many programs are designed to attract more affluent customers who, only by virtue of being renters, are unable to participate in NEM, rather than low-to-moderate-income ratepayers who often lack access to capital or traditional markers of "creditworthiness." Policymakers have addressed this by creating carve-outs that require project developers to include a certain percentage of low-to-moderate-income ratepayers in the project.¹⁶³ However, this structure, where low-to-moderate-income ratepayers are ancillary, rather than central, to project design limits the potential benefits to low-income communities.¹⁶⁴ It also undermines the original rationale for enacting community energy statutes. Second, the pervasive third-party ownership of projects by project developers rather than communities also limits opportunities for the economic benefits of the project to flow to communities.¹⁶⁵ Third, economies of scale make it more attractive for project developers to develop larger energy projects, rather than small-scale projects

¹⁶⁰ See U.S. Department of Energy Energy Efficiency & Renewable Energy, *A Guide to Community Solar: Utility, Private, and Non-profit Project Development* (2010) 47, available at <https://www.nrel.gov/docs/fy11osti/49930.pdf>, archived at <https://perma.cc/YPM9-FHAY>.

¹⁶¹ See Baker, *Unlocking the Energy Commons*, *supra* note 134, at 217 ("Three types of ownership models comprise the community shared solar approach to community energy development: utility or third-party owned projects; special purpose entity-owned projects; and non-profit owned projects.").

¹⁶² See JEFFREY J. COOK & MONISHA SHAH, NAT'L RENEWABLE ENERGY LAB, FOCUSING THE SUN: STATE CONSIDERATIONS FOR DESIGNING COMMUNITY SOLAR POLICY 11 (2018), <https://www.nrel.gov/docs/fy18osti/70663.pdf>, archived at <https://perma.cc/G9WE-GBKQ> ("To ensure projects are truly shared in nature and the benefits are not funneled to one or two primary customers, 12 states have established minimum subscriber requirements and/or maximum subscription limits for individual subscribers participating in community solar projects.").

¹⁶³ See Baker, *Unlocking the Energy Commons*, *supra* note 134, at 224–27.

¹⁶⁴ See *id.*

¹⁶⁵ See *id.*

that could be co-located within local communities and provide valuable backup power during major climate change events.¹⁶⁶

In short, community energy programs hold great promise, but in practice leave the underlying, unequal energy system intact. Due to structural limitations, low-to-moderate-income communities cannot access community energy programs in large numbers, and the programs fail to explicitly target these customers for community energy projects. Although community energy could be used as a tool for transformation of the energy system by empowering low-to-moderate-income communities to own and control their own energy resources, community energy, as currently structured, merely serves as a transitional policy within a resilient energy system. In essence, community energy policies incorporate clean energy resources into a system whose social and economic features remain unchanged.

C. *Spatial Dimensions of Resilience: Grid Resilience*

Resilience thinking has also made its way into the discourse concerning the nation's energy grid. In 2017, the National Academies of Sciences issued a report, *Enhancing the Resilience of the Nation's Electricity System*, which provides a comprehensive set of recommendations to strengthen the resilience of the nation's energy system.¹⁶⁷ One recommendation to the Department of Energy, Department of Homeland Security, and local and state regulators was for the Federal Energy Regulatory Commission (FERC) to “address the growing risk of interdependent infrastructure”—language that alludes to the need for system transformation.¹⁶⁸

The Federal Power Act charges FERC with regulating certain aspects of the nation's energy system.¹⁶⁹ FERC acts as a quasi-judicial entity with regulatory authority over, among other things, interstate transmission of electricity and wholesale sales of electricity.¹⁷⁰ In January 2018, the agency opened a new proceeding that addressed the resilience of the “bulk power system in the regions operated by regional transmission organizations (RTOs) and independent system operators (ISOs).”¹⁷¹ RTOs and ISOs transmit power regionally and across state lines. The Federal Power Act defines the bulk power system as: “(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to main-

¹⁶⁶ See *id.* at 225–26; COOK & SHAH, *supra* note 162, at 8–9.

¹⁶⁷ See NAT'L ACADS. OF SCI., ENG'G, AND MED., *ENHANCING THE RESILIENCE OF THE NATION'S ELECTRICITY SYSTEM* 134–140 (2017).

¹⁶⁸ See *id.* at 140.

¹⁶⁹ 16 U.S.C. § 824(a) (2012).

¹⁷⁰ *Id.*

¹⁷¹ *Order Terminating Rulemaking Proceeding, Initiating New Proceeding, and Establishing Additional Procedures*, 162 FERC ¶ 61,012 at para. 1 (issued Jan. 8, 2018).

tain transmission system reliability.”¹⁷² The proceeding raises a host of issues relevant to the energy transition and its racial and economic justice implications. This section briefly describes the proceeding and the perspectives of the relevant stakeholders, and then evaluates how FERC’s reliance on resilience framing reifies the unequal aspects of the nation’s energy system.

Before discussing the Grid Resilience proceeding, it is worth mentioning its procedural history. On September 29, 2017, Secretary of Energy Rick Perry proposed a rule directing FERC to establish a “reliability and resilience” subsidy for power suppliers that provide a measure of resilience within the nation’s energy system.¹⁷³ Specifically, Secretary Perry proposed that the Commission: “establish a tariff mechanism providing for: (1) the purchase of energy from an eligible ‘reliability and resilience resource;’ and (2) the recovery of costs and a return on equity for such resources (i.e. a ‘resilience rate’).”¹⁷⁴ Notably, the proposed rule also required that resources deemed eligible for the reliability and resilience tariff “have a 90-day fuel supply on site.”¹⁷⁵ Given that fossil fuel and nuclear facilities are more likely to meet such fuel supply requirements, critics of the proposed rule saw it as an effort to bolster the coal and nuclear industries amidst changing market conditions that favor renewable energy and other distributed energy resources.¹⁷⁶ FERC’s January 2018 order soundly rejected the proposed rule as lacking substantial evidence to support such a subsidy.¹⁷⁷

Perry’s conflation of resilience with reliability is notable, because it makes it difficult to challenge resilience as a normative good, since most people want a “reliable” electricity system. Perry’s attempted use of resili-

¹⁷² 16 U.S.C. § 824(o) (2012).

¹⁷³ *Secretary Perry Urges FERC to Take Swift Action to Address Threats to Grid Resiliency*, U.S. DEP’T OF ENERGY (Sept. 29, 2017), <https://www.energy.gov/articles/secretary-perry-urges-ferc-take-swift-action-address-threats-grid-resiliency>, archived at <https://perma.cc/Q2EZ-CYAP>; *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, at para. 2.

¹⁷⁴ *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, at para. 2.

¹⁷⁵ *Id.*

¹⁷⁶ See, e.g., Steven Mufson & Chris Mooney, *Rick Perry Just Proposed Sweeping New Steps to Help Struggling Coal and Nuclear Plants*, WASH. POST (Sept. 29, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/09/29/rick-perry-proposes-sweeping-new-moves-to-support-coal-and-nuclear-plants/?utm_term=.ab85b4a20e09, archived at <https://perma.cc/NV6Q-2J3Z>; David Roberts, *A Moment of Truth Arrives for Rick Perry’s Widely Hated Coal Bailout*, VOX (Dec. 11, 2017), <https://www.vox.com/energy-and-environment/2017/12/9/16745084/rick-perry-coal-bailout-ferc>, archived at <https://perma.cc/HE8L-97K5>; Jeff St. John, *Behind the Backlash to Energy Secretary Rick Perry’s Demand for Coal-Nuclear Market Intervention*, GREENTECH MEDIA (Oct. 5, 2017), <https://www.greentechmedia.com/articles/read/behind-the-backlash-to-energy-secretary-rick-perrys-demand-for-coal-nuclear#gs.61Si8Q>, archived at <https://perma.cc/6D4M-LNvy>.

¹⁷⁷ *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, at para. 14 (“The FPA is clear: in order to require RTOs/ISOs to implement tariff changes as contemplated by the Proposed Rule, there must be a demonstration that the specific statutory standards of section 206 of the FPA are satisfied . . . [and] the Proposed Rule did not satisfy those clear and fundamental legal requirements under section 206 of the FPA.”).

ence to buttress the fossil fuel industry also emphasizes how resilience can be utilized to perpetuate a grossly inequitable energy system.

Despite rejecting Secretary Perry's "reliability and resilience" tariff mechanism, the Commission noted, "[we have] taken action to address reliability and other issues with regard to the bulk power system that have helped with the bulk power system's resilience, even though we may have not used that particular term," and "[n]otwithstanding . . . [the Commission's] efforts to address the resilience of the bulk power system, we conclude that resilience remains an important issue that warrants the Commission's continued attention" ¹⁷⁸

In the order opening the Grid Resilience proceeding, the Commission makes a few important moves. First, the Commission defines resilience, particularly within the context of the bulk-power system, as "[t]he ability to withstand and reduce the magnitude and/or duration of disruptive events, which includes the capability to anticipate, absorb, adapt to, and/or rapidly recover from such an event."¹⁷⁹ Second, the Commission identifies the key goals of the proceeding: "(1) to develop a common understanding among the Commission, industry, and others of what resilience of the bulk power system means and requires; (2) to understand how each RTO and ISO assesses resilience in its geographic footprint; and (3) to use this information to evaluate whether additional Commission action regarding resilience is appropriate at this time."¹⁸⁰ Third, the Commission opens a broad, far-reaching, and potentially transformative conversation about the future of the nation's energy system. Given the breadth of the bulk power system's coverage and its potential to shape markets, it seems that every aspect of the energy system, including local distribution, could be up for discussion. A sampling of stakeholder comments in the proceeding implies as much.

Responses to the proceeding reflect the full breadth of the term "resilience" and its potential for coopting by various interests, including the fossil fuel industry. The American Coalition for Clean Coal Electricity emphasized the importance of fuel security in the definition of resilience, noting that the existing coal fleet offers such fuel security.¹⁸¹ The Environmental Defense Fund (EDF) also emphasized fuel security, but rather than focusing on coal, suggested that the Commission recognize the growing role of natural gas in the electricity sector.¹⁸² EDF urged the Commission to strengthen the market rules and transactional structures relating to natural gas, noting that the "gas

¹⁷⁸ *Id.* at paras. 12, 13.

¹⁷⁹ *Id.* at para. 23.

¹⁸⁰ *Id.* at para. 18.

¹⁸¹ American Coalition for Clean Coal Electricity and National Mining Association, *Reply Comments on Proposed Rulemaking on Grid Reliability and Resilience Pricing* (Nov. 7, 2017), https://elibrary.ferc.gov/idmws/doc_info.asp?document_id=14617913, archived at <https://perma.cc/8PVJ-QGCU>.

¹⁸² Environmental Defense Fund, *Comment on Proposed Rulemaking on Grid Reliability and Resilience Pricing* (Oct. 23, 2017), https://elibrary.ferc.gov/idmws/doc_info.asp?document_id=14612326, archived at <https://perma.cc/RB87-H4WA>.

market rules are a generation behind the electric market, and the market regulatory paradigm needs to be updated to accommodate the new largest user of the gas system—electric generators.”¹⁸³ Notably, the Union of Concerned Scientists and a group self-titled “Public Interest Organizations”¹⁸⁴ both filed comments that emphasized the current resilience and reliability of the system as is, urging the Commission to “resist imposing top-down remedies without an identified concern,” because this “would simply result in higher customer bills—without any identified benefit.”¹⁸⁵ In its filing, Columbia Law School’s Sabin Center for Climate Change Law argued that the RTO and ISO filings did not give sufficient weight to the potential for climate change to disrupt the bulk power system.¹⁸⁶ The Center suggested that the Commission convene a technical conference to address the broader trends related to climate change and its potential impact on the bulk power system.¹⁸⁷

Missing from the order initiating the proceeding and the filings from prominent parties were any explicit mentions of social justice, racial justice, or vulnerability. Instead, resilience was presented as a normative good to which each RTO and ISO should aspire. Regardless of the changing regulatory, political, and economic environment that has helped facilitate a shift away from fossil fuels, embedded in the normative framing concerning resilience is a tendency to “freeze[] in place” energy assets,¹⁸⁸ and to avoid a discussion of existing concerns with the externalities of power production.

¹⁸³ Environmental Defense Fund, *Reply Comments on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/idmws/doc_info.asp?document_id=14667918, archived at <https://perma.cc/78MB-M6CP>.

¹⁸⁴ The membership of “Public Interest Organizations” consists of Sustainable FERC Project, Natural Resources Defense Council, Acadia Center, American Wind Energy Association, Clean Wisconsin, Conservation Law Foundation, Earthjustice, Environmental Defense Fund, Environmental Law & Policy Center, Fresh Energy, NW Energy Coalition, Sierra Club, Southern Renewable Energy Association, Union of Concerned Scientists, Vote Solar, Western Grid Group, and Wind on the Wires. See *infra* note 185.

¹⁸⁵ Earthjustice et al., *Comments of Public Interest on Proposed Rule on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/idmws/doc_info.asp?document_id=14667909, archived at <https://perma.cc/UHN2-9AXC>.

¹⁸⁶ Sabin Center for Climate Change Law, *Comment on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (Apr. 13, 2018), https://elibrary.ferc.gov/IDMWS/doc_info.asp?document_id=14659444, archived at <https://perma.cc/PRQ5-F7WW>.

¹⁸⁷ *Id.*

¹⁸⁸ BAKER, *supra* note 122, at 23. In her concurring opinion to the January 8 Order, Commissioner LaFleur said that Energy Secretary Perry’s proposed order “sought to freeze yesterday’s resources in place indefinitely, rather than adapting resilience to the resources that the market is selecting today or toward which it is trending in the future.” *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, Commissioner LaFleur’s Concurrence at 4. However, at the beginning of her concurrence she reiterated the positive features of resilience, defining it as “the ability to withstand or recover from disruptive events and keep serving customers.” *Id.* at 1. Commissioner Chatterjee was more approving of Secretary Perry’s proposed order and even voiced his “concerns regarding bulk power system resilience,” emphasizing the need to consider, “as soon as practicable, whether interim measures may be needed

Cloaking the entire transmission and bulk fuel supply system with the fabric of resilience shields the underlying harmful aspects of the energy system from critique.¹⁸⁹ Although the RTO and ISO filings indicate that organizations have shown substantial flexibility and adaptability to changing conditions,¹⁹⁰ the Commission's focus on resilience without concern for the legacy of injustice at the heart of the nation's fuel supply will likely lead to the hardening of the existing unjust system.

In a proceeding as far-reaching as this one, FERC missed a critical opportunity to frame resilience in ways that explicitly consider equity concerns. Taking the comments of the Sabin Center a step further, the Commission might have requested that RTOs and ISOs explicitly incorporate metrics concerning climate change vulnerability as a component of resilience in their analysis. This analysis could have given rise to an evaluation of clean energy and distributed energy alternatives to the existing system. A vulnerability-focused framing of resilience could have allowed RTOs and ISOs to consider transformative clean energy alternatives to the existing system rather than focusing on ways to support the existing fossil fuel system. This analysis could have opened the door to considerations of race, equity, and unequal burdens in ways the current framing does not.

to avoid near-term bulk power system resilience challenges that could result from the rapid, unprecedented changes in our generation resource mix." *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, Commissioner Chatterjee's Concurrence at 1. Commissioner Glick was the most forward thinking in his concurrence, stating that "[t]he record in this proceeding does not demonstrate any need for the Commission to interfere with the continued evolution of the bulk power system." *Order Terminating Rulemaking Proceeding*, 162 FERC ¶ 61,012, Commissioner Glick's Concurrence at 2. However, even Commissioner Glick's statement reinforces the perspective that our energy infrastructure is evolving at an acceptable rate and in suitable ways, when in reality that is not the case.

¹⁸⁹ See, e.g., MacKinnon & Derickson, *supra* note 99, at 261. MacKinnon and Derickson note that using resilience in the context of economic shocks has resulted in taking "capitalism for granted as an immutable external force akin to the forces of nature, while focusing attention on the self-organizing capacities of places to become more resilient." *Id.* This approach, the authors argue, fosters injustice by failing to critique the underlying aspects of the economic system that are prone to shocks.

¹⁹⁰ See, e.g., Eversource Energy, *Reply Comments on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14667742, archived at <https://perma.cc/LN9L-4DP5>; New York Independent System Operator, Inc., *Comment on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14667761, archived at <https://perma.cc/7FMR-6P28>; Southern California Edison Company, *Comments on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14667836, archived at <https://perma.cc/4KU5-ZEHV>; Pacific Gas and Electric Company, *Reply Comments on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14667839, archived at <https://perma.cc/BQT3-WXN2>; PJM Power Providers Group, *Comment on Proposed Rulemaking on Grid Resilience in Regional Transmission Organizations and Independent System Operators* (May 9, 2018), https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14667814, archived at <https://perma.cc/8RWU-UN47>.

IV. TOWARD SYSTEM TRANSFORMATION: PRINCIPLES AND TOOLS OF ANTI-RESILIENCE

The foregoing discussion illustrates that the clean energy transition is not inherently just. It also shows that resilience can be used to perpetuate the ills of the dirty energy system as well as move toward a cleaner one.¹⁹¹ The resilience narrative embedded within the dominant policy approaches to the clean energy transition limits opportunities for distributive justice. The next Part introduces a novel approach to energy policy, *anti-resilience*, that aims explicitly to disrupt and upend the power dynamics embedded within the modern energy system. Anti-resilience expressly incorporates the politics of anti-racism, anti-oppression, equity, and transformation. Rather than treat the concerns of people of color and the poor as ancillary issues in the design of energy policy or problems to be remedied *ex post facto*, anti-resilience framing centers the issues and concerns of the marginalized *ex ante*. These concerns become the core drivers of energy policy.

A. *Anti-Racist: Centering Concerns of Communities of Color*

If you splinter off the interstate from Houston into the inky dark of the sloughs and bayous surrounding Texas State Highway 73, you will eventually emerge on the outskirts of Port Arthur and into the otherworldly light of one of the world's largest oil refinery complexes. Together [the Motiva plant and the Valero plant] refine more than 900,000 barrels of crude per day. . . . On the other side of the road is West Port Arthur: an overwhelmingly African American community of churches, shotgun shacks, and several complexes of low-slung, barracks-like brick row houses—public (or public-assisted) housing meant for those who can't afford to live anywhere else. . . . In 1952, Port Arthur's town fathers took public housing dollars from Washington and erected these apartments directly on the refineries' fence. . . . Within five years, roughly a third of West Port Arthur's 1,500 households were in public housing, and there were only seven white families in the whole community. To this day, it remains roughly 95 percent African American. And as West Port Arthur's enormous refineries have spewed forth benzene, carbon monoxide, sulfur dioxide, and other pollutants—permitted or unpermitted—for more than six decades, the effects of these emissions, then, have been experienced disproportionately by African Americans.¹⁹²

¹⁹¹ See ENERGY DEMOCRACY, *supra* note 34, at 8.

¹⁹² Ted Genoways, *Port Arthur, Texas: American Sacrifice Zone*, NRDC: UNEARTHED (Nov. 13, 2014), <https://www.nrdc.org/onearth/port-arthur-texas-american-sacrifice-zone>, archived at <https://perma.cc/M98B-MJ3G>.

There is nothing natural about the current organization of the energy system. As described in Part I, the current system is a product of the legacy of racism within the United States. Unsurprisingly, this system disproportionately impacts communities of color. Upending a system that is marred by legacies of discrimination requires exposing the current racism embedded within the system and elevating the concerns of people of color. Anti-racism is, therefore, an essential principle of anti-resilience.

Myles Lennon's entreaty to "decolonize" energy is particularly apt for this analysis. He argues that the "Black Lives Matter" heuristic should be deployed as the particular tool for decolonization: since Black lives essentially have not mattered in the design and deployment of the modern energy system, the only way to decolonize the nation's energy system is to make such lives matter.¹⁹³ Every decision, therefore, should be filtered through this heuristic.¹⁹⁴ Energy policy rooted in anti-resilience should take a similar tack.

Anti-resilience incorporates the principle of anti-racism by explicitly placing people of color and the poor at the front of the line to benefit from the new system. Given that people of color and the poor have provided an indirect subsidy to the rest of the beneficiaries of the energy system, primarily by shouldering health burdens and other stressors, the new system should incorporate mechanisms that effectively subsidize their access to the transitional system. Although instances of this are scarce, both domestically and globally, below I outline a few examples for policy makers.

South Africa, whose painful history of racialized apartheid ghettoized Blacks in substandard living conditions and relegated brown people to a societal position beneath whites, provides an instructive example of anti-resilient energy policy rooted in anti-racism. Observers of the global transition away from fossil fuels and toward renewable energy frequently cite South Africa as a leader in this transition.¹⁹⁵ Energy auctions, which provide a platform for renewable energy developers to participate in the new renewable energy market, form the basis for the country's transition away from fossil fuels.¹⁹⁶ South Africa's policymakers designed the energy auctions to attract companies to produce renewable energy at the lowest possible price to users and to address the country's legacy of racism. In effect, policy makers utilized the redistributive potential of energy policy to effect social change.

As Lucy Baker outlines, "[b]lack economic empowerment (BEE) is central to corporate governance in South Africa and was established to address the economic disadvantage of historically marginalized people created by the legacy of apartheid."¹⁹⁷ The energy procurement program, launched in

¹⁹³ Lennon, *supra* note 40, at 19.

¹⁹⁴ *Id.* at 27.

¹⁹⁵ Lucy Baker, *The Evolving Role of Finance in South Africa's Renewable Energy Sector*, 64 *GEOFORUM* 146, 149 (2015).

¹⁹⁶ *Id.* at 146.

¹⁹⁷ *Id.* at 153.

2011, includes a number of requirements in line with BEE: “a minimum of 40% South African entity participation and minimum black ownership of the project company of 12% with a target [project ownership] of 20%.”¹⁹⁸ Further, local communities are required to participate in energy projects at 2.5% ownership, and often participate at higher ownership rates.¹⁹⁹ Early assessments of South Africa’s auction program reveal mixed results.²⁰⁰ However, the South African example dispels notions that an anti-racist approach to energy policy is not possible. Making legacy issues concerning racism the policymakers’ primary concern makes it more likely those policies will avoid disproportionate impacts on communities of color.

Domestically, California’s Senate Bill 535 also offers a glimpse into how anti-racist energy policy could take shape.²⁰¹ The law aims to redistribute the proceeds of the state’s cap-and-trade program to assist front-line community groups in developing energy programs that serve communities of color.²⁰² The law, in part, is premised on the idea that certain communities will face disproportionate threats due to climate change, and thus should be key beneficiaries of programs aimed at redistributing climate costs.²⁰³ The law requires that 25% of California’s “cap-and-trade auction revenues be invested in programs that benefit disadvantaged communities, and that at least 10% of the funds be invested within those geographic areas.”²⁰⁴ At the time of this Article’s publication, the program remains in the early implementation phase, but among organizations that serve at-risk communities of color, there is hope that the program, or one structured like it, could lead to lasting structural change.²⁰⁵

The foregoing approaches demonstrate the promise of anti-racist energy policy. The DNA of these policies reflects the complex histories of the places where they have been enacted. In South Africa, the legacy of apartheid forms the backdrop.²⁰⁶ In California, the disproportionate impacts

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ Alice Kaswan, *Climate Change and Environmental Justice: Lessons from the California Lawsuits*, 5 SAN DIEGO J. CLIMATE & ENERGY L. 1, 32 (2013); Vien Truong, *Addressing Poverty and Pollution: California’s SB 535 Greenhouse Gas Reduction Fund*, 49 HARV. C.R.-C.L. L. REV. 493, 497 (2014).

²⁰² Kaswan, *supra* note 201, at 32–33.

²⁰³ *Id.* at 20–21, 24–29.

²⁰⁴ Truong, *supra* note 201, at 514.

²⁰⁵ *Cap and Trade Revenues Under AB 32 and SB 535*, PUBLIC ADVOCATES, <https://www.publicadvocates.org/our-work/climate-justice/cap-trade-revenues-ab-32-sb-535/>, archived at <https://perma.cc/6YYG-PFWL> (last visited July 22, 2018) (“Since becoming law in 2012, SB 535 has directed billions of dollars from polluter fees toward projects that have reduced the State’s carbon emissions, and helped revitalize disadvantaged communities—the neighborhoods facing the most poverty and pollution—throughout California.”); *cf.* Truong, *supra* note 201, at 529 (noting that although SB 535 is a start, “even a cursory glimpse at health and economic data reveals that SB 535 is woefully insufficient to make up for decades of policies that have harmed the highest need communities”).

²⁰⁶ *See* Baker, *supra* note 195, at 148–49, 153.

of the state's energy system on communities of color informed the policy.²⁰⁷ As stated at the outset, energy policy holds the potential to restructure society by redistributing power along lines of race and class. Energy policy can only work such deep structural change by foregrounding issues of race. An anti-resilient approach to energy policy acknowledges legacies of racism and then explicitly attempts to dismantle them.

B. Anti-Oppression: Focusing on Equity to Level the Playing Field

Through a series of treaties signed in 1851 and 1868, the Great Sioux Nation ceded to the United States a significant portion of the tribe's original ancestral land.²⁰⁸ Nine years later, Congress illegally dispossessed the Sioux of the Black Hills, territory deemed sacred by the Sioux.²⁰⁹ The dispossession was based in large part on broad speculation that the Black Hills "contained vast quantities of gold and silver."²¹⁰ In a Supreme Court case condemning the illegality of the land transfer, the Court describes the role of the United States military in the process: "Lieutenant Colonel George Armstrong Custer led the expedition of close to 1,000 soldiers and teamsters, and a substantial number of military and civilian aides" into the Sioux territory, largely to pacify the Sioux resistance to the questionable terms of the 1851 Treaty of Laramie, as well as to investigate the claims of mineral riches on the land.²¹¹

Past is prologue. An 1889 Act of Congress established the boundaries of Standing Rock Sioux Reservation,²¹² and in 2014 the Standing Rock Sioux Tribe became the focal point of a pitched battle regarding the Dakota Access Pipeline (DAPL), a 1,100 mile-long crude oil pipeline project, authorized by the U.S. Army Corps, that runs from North Dakota to Illinois.²¹³ The proposed pipeline would run under Lake Oahe, approximately half a mile upstream from the Tribe's land.²¹⁴ The Tribe asserts that the Corps' authorizations violate multiple statutes, including the Clean Water Act, the National Historic Preservation Act, and the National Environmental Policy Act.²¹⁵ Further, the Tribe notes, "[s]ince time immemorial, the Tribe's ancestors lived on the landscape to be crossed by the DAPL."²¹⁶ Discussing the

²⁰⁷ See Kaswan, *supra* note 201, at 3–5.

²⁰⁸ Treaty of Fort Laramie, U.S.-Sioux Nation, Sept. 17, 1851, 11 Stat. 749; Treaty with the Sioux, U.S.-Sioux Nation, Apr. 29, 1868, 15 Stat. 635.

²⁰⁹ United States v. Sioux Nation of Indians, 448 U.S. 371, 423–24 (1980).

²¹⁰ *Id.* at 376.

²¹¹ *Id.*

²¹² The Sioux Bill of 1889, 25 U.S.C. § 888 (2012).

²¹³ Rebecca Hersher, *Key Moments in the Dakota Access Pipeline Fight*, NPR (Feb. 22, 2017), <https://www.npr.org/sections/thetwo-way/2017/02/22/514988040/key-moments-in-the-dakota-access-pipeline-fight>, archived at <https://perma.cc/7RS7-ZZQ9>.

²¹⁴ First Amended Complaint for Declaratory & Injunctive Relief at ¶ 3, *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, 239 F. Supp. 3d 77 (D.D.C. 2017), No. 16–1534.

²¹⁵ *Id.* at ¶ 3.

²¹⁶ *Id.* at ¶ 9.

environmental impact of the proposed pipeline, the Tribe states that “[t]he pipeline also crosses waters of utmost cultural, spiritual, ecological, and economic significance to the Tribe and its members.”²¹⁷ Ultimately, the Tribe argues, “[t]he Tribe and its members have been, and are being . . . harmed by the Corps’ failure to comply with environmental and historic preservation laws.”²¹⁸

On November 21, 2016, in sub-zero degree weather, North Dakota law enforcement deployed water cannons on a group of DAPL protestors.²¹⁹ Police outfitted “in riot gear sprayed activists with a hose mounted atop an armored vehicle.”²²⁰ The protestors, self-proclaimed “water protectors,” reported the use of “rubber bullets, tear gas, and concussion grenades” in a standoff that lasted into the evening.²²¹ This dance between oppressed and oppressor is inextricably linked to the initial, state-enforced dispossessions of Native territories for resources deemed valuable. The state-sanctioned sacrifice of waters sacred to Native peoples in the name of energy is another type of dispossession.

Anti-oppression forms a key part of anti-resilience. An energy system built on the principle of anti-oppression would look fundamentally different from the existing system. An anti-oppressive system would honor traditional land uses, respect human bodies, and be free of “sacrifice zones.” In short, such a system would not burden a few to advance its overall goals. In order to be effectuated, an anti-oppression framework would require both procedural justice and substantive justice. In this context, procedural justice demands communities have access to decision-making processes concerning their land.²²² Substantive justice requires fair outcomes for such communities.²²³ These aspects of justice feature prominently in both the environmental justice literature and energy justice literature.²²⁴ An anti-oppression approach to energy policy advances these notions of justice, but goes further, taking into account the historical injustice perpetuated within the structure of the system. In this way, equity—the notion that historically disadvantaged groups should get additional assistance, rather than “equal” assistance, in

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ Derek Hawkins, *Police Defend Use of Water Cannons on Dakota Access Protesters in Freezing Weather*, WASH. POST (Nov. 21, 2016), <https://www.washingtonpost.com/news/morning-mix/wp/2016/11/21/police-citing-ongoing-riot-use-water-cannons-on-dakota-access-protesters-in-freezing-weather/>, archived at <https://perma.cc/GC85-JCZT>.

²²⁰ *Id.*

²²¹ *Id.*

²²² See Baker, *Unlocking the Energy Commons*, *supra* note 134, at 220 (describing procedural justice as a component of energy justice).

²²³ Sovacool & Dworkin, *supra* note 117, at 441.

²²⁴ See, e.g., *id.* at 435; SOVACOO & DWORKIN, *GLOBAL ENERGY JUSTICE*, *supra* note 118, at 5; Benjamin K. Sovacool et al., *New Frontiers and Conceptual Frameworks for Energy Justice*, 105 ENERGY POL’Y 677, 677 (2017); Sara Fuller & Darren McCauley, *Framing Energy Justice: Perspectives from Activism and Advocacy*, 11 ENERGY RES. & SOC. SCI. 1, 2–5 (2016); Heffron et al., *supra* note 124, at 168.

order to level a historically uneven playing field—becomes a part of the fabric of anti-resilience.²²⁵

One way policymakers, including utilities regulators and local governmental officials engaged in designing local energy programs, might advance anti-oppression ideals is by creating sub-governmental organizations focused on energy policy that specifically include underrepresented communities. In effect, representatives of communities of color and low-income communities would be able to participate in governance activities that affect their communities.²²⁶ Regulators and local governments should also identify organizations that work with front line communities to incorporate their voices into sub-governmental structures focused on energy decision-making. This method of energy decision-making acknowledges that there is no singular approach to energy policy, and that energy stakeholders, particularly the most vulnerable, are best positioned to create frameworks that unburden them.

This approach to energy policy is fundamentally anti-resilient because it upends the hierarchy hardwired into the energy system. Energy project siting decisions, such as the decision at the heart of the DAPL conflict, are vulnerable to critique because they often lack opportunities for meaningful grassroots engagement and prior consultation.²²⁷ Project developers typically seek community approval only after feasibility studies have been completed and financing has been secured for the project.²²⁸ In this way, community participation in energy decision-making merely serves as a non-substantive “check” in the box on the way to realize the project.²²⁹ Sub-governmental groups comprised of individuals from disproportionately burdened communities would facilitate engagement in crucial energy decisions, such as siting,

²²⁵ See, e.g., *Equality v. Equity: Understanding the Differences*, GENERAL COMMISSION ON RELIGION AND RACE, <http://www.gcort.org/equity-vs-equality/>, archived at <https://perma.cc/R4XL-Y33W>.

²²⁶ One example of this in practice is the Public Interest & Accountability Committee (PIAC) of Ghana. The group was formed after the discovery of commercial quantities of oil and gas off the coast of Ghana in an effort to avoid mismanagement and ensure equitable distribution of oil and gas revenues. Lawmakers passed legislation that formed PIAC to promote the transparent management of petroleum revenues in the country. The group issues semi-annual reports and makes recommendations concerning the use of revenues. See PUBLIC INTEREST AND ACCOUNTABILITY COMMITTEE, <http://www.piacghana.org/portal/>, archived at <https://perma.cc/7MGK-U6EM>.

²²⁷ Robinson Meyer, *The Legal Case for Blocking the Dakota Access Pipeline*, THE ATLANTIC (Sept. 9, 2016), <https://www.theatlantic.com/technology/archive/2016/09/dapl-dakota-sitting-rock-sioux/499178/>, archived at <https://perma.cc/C8U7-WW25> (discussing claims by Standing Rock Sioux Tribe that the Army Corps of Engineers approved the pipeline before consulting the Tribe); see also Uma Outka, *Siting Renewable Energy: Land Use and Regulatory Context*, 37 *ECOLOGY L. Q.* 1041, 1060 n.108 (2010).

²²⁸ Shalanda H. Baker, *Why the IFC's Free, Prior, and Informed Consent Policy Does Not Matter (Yet) to Indigenous Communities Affected by Development Projects*, 30 *WIS. INT'L L.J.* 668 (2012).

²²⁹ See Meyer, *supra* note 227 (noting that, only “near the end of the process, when approval seemed inevitable, did North Dakota state authorities approach the tribe” to discuss project concerns).

prior to project selection. The groups in essence would serve as a decision-making filter for agencies engaged in approving critical decisions.

The substantive justice aspects of anti-oppression relate to economics. Much like the oil dividends provided to Alaska residents,²³⁰ policymakers should design approaches to energy policy that redistribute the economic benefits of the energy system. For example, even the most progressive approaches to community energy policies embed requirements for low-income participation as ancillary features, meaning that developers are only required to include low-income electricity customers as a minority percentage of the overall community energy project.²³¹ Anti-oppression would invert this dynamic and require that the majority of participants in community energy programs be people of color and low-income people. This approach would limit the ongoing oppression of people of color and low-income people through the energy transition and make these communities the centerpiece, rather than unintended beneficiaries, of the transition. This equity-based approach acknowledges the historical subsidy these communities have given to other participants in the energy system as well as utilities through increased health and environmental burdens. Substantive justice requires policies designed to reflect these historical burdens and offer structural advantages to project developers, such as utility company-based guarantees that guarantee program payments of low-income participants,²³² to reflect the economic burdens placed on low-income communities and communities of color.

²³⁰ Dylan Matthews, *The Amazing True Miracle of the Alaska Permanent Fund*, Vox (Feb. 13, 2018), <https://www.vox.com/policy-and-politics/2018/2/13/16997188/alaska-basic-income-permanent-fund-oil-revenue-study>, archived at <https://perma.cc/UT8J-H8AP>.

²³¹ Colorado's Community Solar Garden (CSG) policy is a prime example of this. Under Colorado law, a Qualifying Retail Utility (QRU) obtains subscribers for the energy that a CSG produces. Colorado law requires a QRU to reserve "at least five percent" of a CSG's total energy for low-income residents that the QRU would like to subscribe. 4 COLO. CODE REGS. § 723-3-3665(d)(V) ("In each plan to acquire renewable energy and RECs from CSGs, the investor owned QRU shall reserve, to the extent there is demand for such ownership, at least five percent of its renewable energy purchases from new CSGs for eligible low-income CSG subscribers.").

²³² See, e.g., *Annual Low Income Program Update Report – New York*, CONEDISON 2 (Dec. 1, 2017), <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B40FD96A0-F1D9-4CD0-83D8-F7D8FE397103%7D>, archived at <https://perma.cc/N2NC-3ZLW> ("[T]he Company's Low Income Programs provide bill discounts to customers who receive benefits under qualifying public assistance programs."); *Community Solar Guaranty Grant Program*, MD. ENERGY ADMIN. (Apr. 18, 2018), <http://energy.maryland.gov/residential/Documents/Community%20Solar%20Guaranty%20Grant%20Program%20-%20Notice%20of%20Grant%20Availability.pdf>, archived at <https://perma.cc/F87L-TLE7> ("In support of this program, the Maryland Energy Administration developed the Community Solar Guaranty Program in order to assist Subscriber Organizations developing community solar arrays under the Low-and-Moderate Income (LMI) category, mitigate the perceived financial risks associated with working with this community."); *Community Solar Pilot Program – Draft Program Guidelines*, CAL. DEP'T COMMUNITY SERVS. & DEV. (June 25, 2018), <http://www.csd.ca.gov/Portals/0/Documents/LIWP/Community%20Solar/Community%20Solar%20Draft%20Program%20Guidelines.pdf>, archived at <https://perma.cc/9JJ4-SD9S> (creating a pilot program for community solar that "will provide up to \$5 million in funding for two or more community solar projects for the purposes of making the benefits of solar energy more available to eligible low-income households," with the program hopefully addressing "barriers that low-income

Similarly, policymakers should utilize the existing structure of net energy metering to incentivize, rather than limit, additional participation by people of color and low-income communities. High electricity costs disproportionately burden low-to-moderate-income households and also force them to make difficult decisions concerning distribution of household expenses. To alleviate this burden, policies should provide low-income participants with access to customer-sited rooftop energy and the eventual opportunity for outright ownership. This policy would serve two purposes. First, ownership of power generation helps to alleviate economic burdens by lowering the cost of electricity over time. Second, distributed energy generation backed up by batteries makes households less vulnerable to climate change-related events. Examples of these twin benefits abound.

For example, in Hawaii, the homeowner who benefitted from the state's original NEM program now pays approximately \$18 per month for electricity, compared to the state's average \$135 per month per household for electricity.²³³ For low-to-moderate-income utility customers, these cost savings could obviate the need to choose between buying additional healthy groceries, using additional lighting for evening chores and homework, and utilizing air conditioning. Such benefits would be widespread. As Diana Hernández notes, in America, more than 80% of "impoverished households experience energy insecurity," defined as "spending more than 10% of household income on utility expenses."²³⁴

Energy policy that centers the voices of historically oppressed communities can structurally transform these circumstances and provide critical power during major weather events. The widespread power outages after Hurricane Sandy and Hurricane Maria illustrate the critical importance of electricity, especially for low-to-moderate-income households. Such households often stretch resources and are unable to replace foods and medicines that spoil during major weather events. Backup power, supported by battery systems, allows these households to weather these events without setbacks. An anti-resilience approach requires that energy policy provide this mini-

households might otherwise experience in seeking to access available community solar options, such as premium costs and/or qualifying conditions"); Steve Calechman, *Making Community Solar Work for Low-Income Customers*, GREENTECH MEDIA (Mar. 14, 2016), <https://www.greentechmedia.com/articles/read/making-community-solar-work-for-low-income-customers-is-crucial-for-growth#gs.nbSPsAM>, archived at <https://perma.cc/S46B-DXMB>.

²³³ *Hawaii Energy Facts & Figures*, HAW. ST. ENERGY OFF. 4–6 (May 2017), https://energy.hawaii.gov/wp-content/uploads/2011/10/HSEOFactsFigures_May2017_2.pdf, archived at <https://perma.cc/APM5-PUCX>. This assumes that the homeowner is able to get all of their electricity from their solar array each month. In its detailed rate summaries letter for rates effective July 1, 2018, Hawaiian Electric lists a minimum charge for residential electricity of \$18.00 "per customer per month." Kevin M. Katsura, *Letter to the Hawai'i Public Utilities Commission re: Effective Rate Summaries*, HAWAIIAN ELECTRIC (June 29, 2018), https://www.hawaiianelectric.com/Documents/my_account/rates/effective_rate_summary/efs_2018_07.pdf, archived at <https://perma.cc/3N8B-U4P6>.

²³⁴ Diana Hernández et al., *Housing Hardship and Energy Insecurity Among Native-Born and Immigrant Low-Income Families with Children in the United States*, 22 J. CHILD. & POVERTY 77, 79 (2016).

num level of security to vulnerable communities, which already shoulder the energy system's burdens.

C. *Toward System Transformation: Beyond Energy "Transition"*

Anti-resilience requires politics that transform the role of energy in the U.S. economy, government and culture. This transformation would open new possibilities for policy interventions as well as relationships of the poor and people of color to energy resources. Transition thinking, saturated with the rhetoric of "resilience," freezes in place old concepts of energy and suggests a system that will remain largely intact, merely with new constituent parts. I propose that policymakers recognize the current shift away from fossil fuels toward clean energy as an opportunity for system transformation, not merely a system transition. For transformation thinking to take hold, however, we must reorient ourselves to our very understanding of the nature of energy. This orientation opens up every aspect of the system for examination.

Thinking about energy in abstract, rather than concrete, terms helps create the possibility for system transformation. Myles Lennon describes the duality of the current conceptions of energy in two ways: "Big E" energy and "little e" energy.²³⁵ He relates our understanding of energy, "Big E," as a discursive node that is produced and reproduced by our very understanding of it.²³⁶ The utility system, oil and gas pipelines, and centralized ownership and production, all form a part of this node and are reinforced as we continue our interaction with the system.

The discursive production of the energy system leaves open the possibility of disruption. The foil of "Big E," "little e," refers to the subtle ways that energy moves in our lives.²³⁷ "Little e" energy, for example, is reflected in the sunshine that grows the food that provides sustenance to our bodies.²³⁸ In essence, the scaffolding that we erect around energy—whether it be policy or other power structures—directly connects to our understanding and discursive production of energy concepts. Since we are creators of our understanding of energy, it is not fixed.

Anti-resilience requires new conceptions of energy that obviate the need for a racialized hierarchy of oppression in order to support the energy system. In *Unlocking the New Energy Commons*, I argue for a more expansive view of energy—as a commons—that yields new possibilities of ownership structures and relationships to power.²³⁹ This type of reconceptualization is perhaps less concrete than notions of anti-racism or

²³⁵ Lennon, *supra* note 40, at 19.

²³⁶ *Id.* at 19–23.

²³⁷ *Id.* at 19.

²³⁸ *Id.*

²³⁹ Baker, *Unlocking the Energy Commons*, *supra* note 134, at 229–34.

anti-oppression, but it strikes directly at the heart of the power relationships that undergird the current energy system.

Within a frame of transformation, the edges of the energy system begin to soften and meld into other notions of property, beyond private resource ownership and toward conceptions of shared management and control. Old conceptions of the system yield to new possibilities that have not yet been contemplated, but which allow individuals and communities to interact with their energy resources to affect their highest good.

CONCLUSION

The interventions outlined in this Article might seem radical. I have argued here for an approach to energy policy that is anti-resilient and that topples the racist, unnatural, and unfair aspects of the current energy system. I have argued that the energy policies designed to facilitate the current energy transition away from fossil fuels and toward clean energy are the most fertile site for this disruption and dismantling. Energy policy must be anti-racist, meaning that policy must center the voices of communities of color in order to transform the historical relationship between black and brown bodies and the nation's energy system.

Energy policy must also be anti-oppressive. I have argued here for procedural and substantive justice that acknowledges the past so as not to repeat it, and that benefits those who have historically shouldered the burdens of the nation's energy system. And I have argued for economic justice that allows for individuals and communities within historically marginalized groups to change their economic relationship to energy. The current energy system, which disproportionately burdens black and brown bodies, must also transform, and the energy transition to renewable energy unfolding around the country has the power to facilitate this transformation.

If these are radical propositions, then I accept the charge. Black and brown communities have disproportionately borne the burden of the nation's fossil fuel-based energy system, which itself has led to climate change events that will harm these same communities in disproportionate numbers. Policymakers should redesign energy policies to produce some measure of equity.

And so, how do we know when a thing transforms? The evidence will be manifest in the expansion of economic opportunities for low-to-moderate-income people and people of color due to their ownership and control of their energy resources. The transformation will be complete when the organizations that serve front line communities are active decision makers in the siting of energy facilities. The power revolution will have ended when there are no more Port Arthurs of which to speak. But the unjust structure undergirding the entire thing must first dissolve.

The energy system must become anti-resilient.

This may be radical, but it can also be incremental. It can be incremental so long as the baby steps march in the direction of system transformation. The current energy transition holds great promise to dismantle deep-seated legacies of racism and oppression. I remain hopeful that, state by state, those responsible for energy policy will see its vast potential to restructure harmful social relationships that we have come to regard as normal and natural. But even if those with the power to do this work do not act, I have hope that the many civil rights and social justice organizations serving front line communities will come to see the transformative potential of this energy transition. The anti-resilience framework outlined in this Article provides an arrow in the quiver of the next revolution.