

2017

Democracy in the Dark: An Energy Democracy Model Centering Property and People

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Recommended Citation

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Democracy in the Dark:
An Energy Democracy Model Centering Property and People

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Submitted to Pitzer College in partial fulfillment of the degree of Bachelor of Arts in
Environmental Analysis

Readers: Professor Melinda Herrold-Menzies and Professor Elijah Quetin

Submitted April 27, 2017

Abstract

The United States' electric macro-grid provides electricity for all people to sustain our lifestyle. The current governing institutions that generate our electricity limit community representation, causing procedural injustice particularly to communities of color. This thesis is a contribution to the Energy Democracy literature, describing a community-based electricity model that includes two components: **property and people**. I argue to include an in-depth study of John Locke's theories on property, in addition to Elinor Ostrom's Institutional Analysis and Development Framework to promote local knowledge in understanding how physical space and governing bodies strengthen the Energy Democracy movement. In addition, I utilize the works from Karl Marx and Grace Lee Boggs to describe the process of local self-reliance to community empowerment. This Energy Democracy approach centering property and people aims to revolutionize a system that promotes equity and democracy.

Acknowledgements

I would like to begin thanking my mom for her endless support. You have taught me to take on anything I believe in. You are a model of empathy and selflessness.

A big thank you to my thesis readers Professor Elijah Quetin and Professor Melinda Herrold-Menzies. You two have supported my work since the beginning. Thank you for taking the time to thoroughly brainstorm and challenge my preconceived ideas. Additionally, thank you to the faculty and staff who have inspired me to think critically and act with compassion. Thank you to my thesis professor, Susan Phillips for your guidance. Special thanks to Professor Kathy Yep. Your practice in mindfulness and compassionate listening has transformed my perspective of the world.

To my friends - Rachel, Shinara, Rahul, Taylor, and Harry. Thank you for occupying the library space with me. We made it! I am also grateful for The Community. You five have shown constant support throughout the thesis process. During my research and writing, I found solidarity with other first generation and students of color - thank you for your intentional kindness. I would like to dedicate this thesis to upcoming first generation seniors who will be writing a senior thesis/ research; your opinions are valid and they matter!

I dedicate this thesis to the Energy Democracy movement. Past, current and future Energy Democracy scholars who have instilled passion and courage in the movement, including Local Clean Alliance and Trade Unions for Energy Democracy. I am thankful to the individuals who have welcomed me to this community and truly envision a brighter and equitable future.

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Introduction

I entered different ecosystems one step after another. The Annapurna mountains enveloped me, crisp and cool, and then a glimpse of rainforest, dense and loud. I had trekked east from a Nepali village, TangTing, as part of a home stay experience during my study abroad in Nepal. Every step followed a cadence of holding my breath then a small sigh of relief. After an hour of slipping from mossy slabs of stone, I had arrived at my destination. A fifteen-year old Nepali boy greeted me. I tried speaking Nepali, but the loud rush of water washed my words away. The tiny building behind the boy was what I was looking for. I had been searching for this community-based hydropower plant, but did not intend to meet the boy who worked the various switches to command electricity for the surrounding villages, including Tangting. This boy was a key part in electricity distribution to the surrounding communities.

He continued in Nepali informing me that the small hydropower plant was community-owned. Although the infrastructure was funded by NGOs, the surrounding communities had varying levels of autonomy in decision-making processes (Tangting Personal communications, 2014). The mini hydropower plant was driven by local knowledge. As we exchanged our “namaste,” I found myself in awe walking back home. What does it mean to have control of your own electricity? When was the last time I interacted with someone who directly helped generate my energy? When community members see, smell, hear, and work with their energy, does this change the way they interact with their electricity? I became aware of how complacent I had become. The decision-making processes of the country’s electricity system is

invisible, yet we continue to expect the constant flow of electricity to charge our phones, light our homes, and cook our food.

My interest in understanding collective, community-based energy developments sparked during my study abroad experience in Nepal. Undoubtedly, the massive energy industry in the United States has supported the needs and wants of the country. But to what extent, should we start to challenge the political and social costs that the macro-grid promotes. Is the macro-grid feeding our needs, or is it harming communities, especially communities of color? To address this question, I will use an environmental justice approach as a way to challenge institutional structures that people of color depend on. This thesis introduces the intersection between the energy system and the environmental justice framework, an emerging perspective in the energy literature.

Framework and Positionality

The theoretical frameworks that I will be utilizing connect the environmental justice paradigm, which has informed critical race theory. The environmental justice paradigm intersects race, gender, and class within the environmental discourse as a way to better understand institutional racism in urban and poor communities. I am connecting pieces written by John Locke, Elinor Ostrom, Karl Marx, and Grace Lee Boggs that focus on property and collective action. Their work challenges existing systems, which continue to profit from people's work by undervaluing it. I analyze political theorist John Locke's workmanship theory and Nobel Laureate in economics Elinor Ostrom's study on cultural governance on the commons. Political philosopher Karl Marx and his theories coupled with social activist Grace Lee Boggs and her

ideas suggest that activism among workers and people should shift power from private entities to the common people. I am fascinated with Ostrom's and Boggs's practice in centering communities in their work, in result to promoting the development of individual self. These women continue to one, expose oppressive systems of property and two, counteract it with solutions that include people and culture.

As an Asian-American woman, I have lived and observed institutional racism.

Understanding that every person has spheres of privilege, I am aware that attending a liberal arts institution provides a critical and elitist foundation for understanding systems of oppression. The mainstream environmental movement often recognizes the physical white bodies occupying natural spaces. The early environmental movement focused on ecology and preservation/conservation rather than issues faced by people of color. Especially in the early 1970s, white bodies occupied the streets with signs that read "save the whales" (A Fierce Green Fire, 2012). Early environmental movement sentiments persist in contemporary environmental movements. This thesis contributes to the environmental justice movement founded by professor Robert Bullard, rather than the mainstream environmental scene. As a woman of color environmentalist, I am writing this thesis to broaden an understanding of environmentalism. Typically, the energy literature centers profit and industry, whereas this thesis focuses on understanding communities, and providing solutions to move institutions and people towards a democratic energy grid.

Research and Methodologies

I am dedicating my last semester of my undergraduate studies to the energy democracy discourse, understanding it as a political tool for community empowerment and resilience. I am

asking questions pointed at what “reclaim” means in the energy democracy movement.

According to the energy democracy literature, current electricity distribution institutions are not responsive to community voices (Skinner, 2015) and reclaim is the act of demanding community representation in the electric utility decision-making process for the common people to feel entitled to their energy grid. Weinrub (2014) emphasizes that reclaim is the process to “democratically control” the energy grid. I will delve into a series of questions, including what are the political and social *theories* of property and reclaim? And what are the *applications and implications* of communal property and reclaim? My thesis is a discursive paper, introducing political and social models in an environmental justice lens.

In addition to analyzing works from John Locke, Karl Marx, Elinor Ostrom, and Grace Lee Boggs, I also conducted telephone interviews with energy activists - Al Weinrub from Local Clean Energy Alliance and Michael Sanchez from GRID Alternatives. I also use data from the Energy Information Agency (EIA), the US Census Bureau, and the Joint Center for Housing Studies of Harvard University. As with any scholarly work, there are limitations to this thesis. For further research, I am interested in analyzing a specific case study, particularly of a community of color in the energy democracy movement.

Thesis Format

In this thesis I will contribute to the energy democracy literature by deconstructing political and social practices of communal ownership and community reclamation. **This thesis acts as a model for communities to reclaim their energy, institutionalizing an equitable and transparent electricity generation and distribution system.** The **first chapter** will provide a

picture of the United States' current energy system. The **second chapter** will discuss the impacts of the energy system, specifically those harmful to communities of color. Here, I will explore how undemocratic processes can occur in the electricity generation system because of the unequal local representation in electricity governing bodies, the opacity of knowledge, and the disproportional impact of renting costs to renters of color. In **Chapter Three**, I will introduce a new environmental and political ideology - *Energy Democracy*. Then in **Chapter Four**, I will describe John Locke's property theory and Elinor Ostrom's Institutional Analysis and Development Framework to support a communal property model supported by a cultural commons approach. **Chapter Five** will deepen our understanding of how reclaiming our energy as a body of people can achieve individual freedom using the works of Karl Marx and Grace Lee Boggs. Today, corporate power and political puppets threaten our environment and communities due to opaque decision-making processes; therefore the intersection of an environmental justice framework embedded within the electricity industry is crucial more than ever.

The thesis includes **1)** context of the energy system and the need for social justice grounded energy structures, **2)** theoretical and practical approaches to communal property, and **3)** theoretical and practical approaches to collective-based movements. In conclusion, I propose a model to support the next energy revolution generated and formed by the people. I am arguing for an energy democracy model based on communal property and community mobilizing.

Chapter 1: The United States' Energy System

I will provide context regarding the relationship between the United States' electric utility industry and energy policy. The section aims to deconstruct the closely tied relationship between the economy and the country's energy system.

From academics to technicians, energy enthusiasts spend their entire careers understanding the complex structure of the United States energy system, as it consists of multiple layers including gathering resources, production, generation, and consumption. The U.S. energy system accounts for many processes such as gathering raw materials, production, generation, distribution of electricity, and finally, to consumption (EIA, 2017). This thesis will focus on the electricity distribution system. To understand the very essence of how energy works, I was taught the technical approaches and scientific jargon within the college classroom. From the laws of thermodynamics to the history of distributed electricity in Southern California, the information taught was essential to understanding the vital role of energy. But it was not until I studied the relationship between individuals and the grid that I started to become fascinated with how our communities function. Billions of people around the world depend on electricity to warm up their soup, do homework, and watch the World Cup. We plug in our phone, car,

personal computer. We plug in to stay connected. Science tells us our very selves are made of energy; the intricacies and characteristics of this energy makes us who we are. We create thermal energy from mechanical energy as our hands rub back and forth, trying to stay warm during a cold evening. Even the food that settles into our stomach gives us energy to then run, laugh, and sing. When individuals are attracted to one another, people say that they possess good “energy.” From the very thing we are made of, atoms and cells to the vastness of our universe, energy is in everything. My journey in understanding our energy system is a step towards understanding who we are and how we create community. Every person is using energy to sustain themselves and the communities we build and thrive in. With this motivation, I will pull apart a very specific section of our energy system in order to understand who it benefits and harms in the process. I will suggest a new energy democracy model in hopes to support communities of color. We have been left in the dark as a non-transparent, extractive electricity industry decides for the common people that they claim to “serve.” This thesis is to shed light on a model that prioritizes community’s reclaim to energy.

As previously stated, the US energy system is a complex system. It begins with mining, fracturing, and/or gathering raw materials from our Earth, then to production, generation, distribution, and then to people. This thesis covers the electricity generation and distribution system to communities, focusing on communities of color. For the purpose of the thesis, I will succinctly introduce the United States’ energy system. The U.S. electric utility is divided into many sections, and the main actors in the distribution of energy are private and public utilities. After providing a broad overview of the utilities industry, I will showcase how energy policy deregulation stems from an economic growth rhetoric. Deconstructing energy policy will expose

the underlying motivations of the country's energy industry. I will analyze the relationship between our economy and the energy industry, as they seemingly act dependent on one another.

Across the country, the electric utility industry makes up more than half of all utilities in the market (Figure 1.1). The electric utility industry has the highest value in regard to the amount and price of market shares, making it one of the most robust economic drivers in the nation, a total worth of \$298 billion (Edison Electric Institute, 2006).

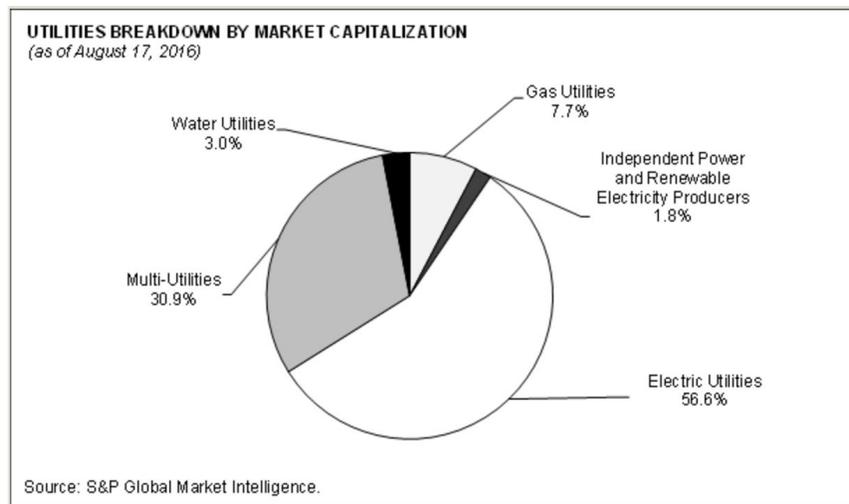


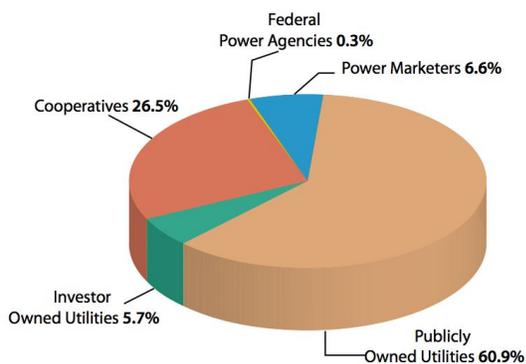
Figure 1.1 Utilities breakdown by utilities industry in the national market. Electric utilities makeup more than half of the utility market- a massive industry involved with global and national players. Source: Market Capitalization from S&P Global Market Intelligence, August 17, 2016

Many ownership types fit under the “electric utility” umbrella, including public (also known as municipal-owned), and private (also known as investor-owned utilities). Although private and public utilities claim that they possess different ownership of systems (state versus private), these two institutions function in similar ways in that they lack local knowledge and community participation.

Public and Private Utilities

The US Energy Information Administration (EIA) is a platform for energy data and research collection to inform impactful energy policy-making. EIA holds a vast array of information including weekly projected outcomes of petroleum and oil consumption to 15 minute real-time data on electricity consumption all over the country. The enormous dataset compiled is a reflection of the large energy industry. EIA compartmentalizes utility ownership in two ways: public/ municipal-owned and private/ investor-owned. Publicly-owned utilities make up a little over 60% of total of electricity providers, while a little over 5% of providers are investor-owned utilities (Figure 1.2).

Number of Electricity Providers



Number of customers served by utilities

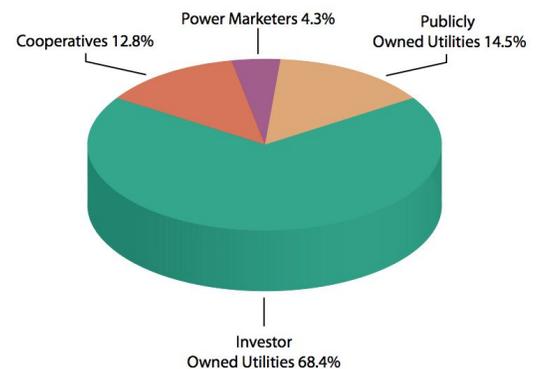


Figure 1.2 The pie chart on the left represents the number of electricity providers in the United States, whereas the chart on the right shows the number of customers the utilities serve. Source: American Public Power Association (2015-2016)

With the statistics stated, one might assume that the energy sector *is* publicly-owned. In reality, most customers are serviced by investor-owned utilities (IOU), with approximately 70% of customers serviced by investor-owned utilities and only 14.5% of customers serviced by publicly-owned utilities (Figure 1.2). Although a large percentage of electricity providers are publicly-owned utilities, most of the customers are served by IOUs (Figure 1.2). In California, Pacific Gas and Electric, San Diego Gas and Electric, and Southern California Edison are the main investor-owned utilities. The three private-owned utility companies serve three quarters of California's electricity demand (Figure 1.3). These utilities are incredible power houses, serving thousands of people, multiple neighborhoods and cities. For example, PG&E essentially provides electricity for all of northern California.

Regardless of a neighborhood's socioeconomic status, the political climate, or the native ecological resources, private and public utilities practices a one-size fits all model. According to California Energy Commission, publicly-owned utilities like Los Angeles Department Water and Power (LADWP) serve neighborhoods comprised of a diverse array of income, racial and ethnic representation, and political backgrounds. LADWP is the largest municipal-owned electric utility in the United States, providing energy to over 4 million residents, but specifically 1.4 million residents and businesses in Los Angeles (LADWP, 2013). Especially in Los Angeles, neighborhoods come in various shapes and sizes. For instance, the median average household income in the Pacific Palisades is \$168,008, whereas in East Los Angeles the median income is about \$38,621(L.A. Mapping, 2000). How can LADWP meet the needs of one Los Angeles neighborhood like the Pacific Palisades while understanding the needs of another neighborhood that differs, demographically, economically and politically like East Los Angeles? They cannot. According to Kunze and Becker (2015), democratizing energy is represented through different organizations, varying spatial setting and political contexts. The one-size-fits-all model that stands today is in favor of an equality approach, rather than an equity approach.

In addition to a universal model, utilities represent and serve customers within a large territory, a design that John Stuart Mill (1848) in the *Principles of Political Economy* claims as "natural monopolies." Because of the large electricity infrastructure and barrier of entry in the electric utility market, "naturally" one company will control the market (Mill, 1848). To many economists, this is a controversial principle because it limits free market. Meanwhile, natural monopolies do not foster culturally appropriate choices for the communities that they serve. My thesis looks to understand the utility industry's motivations, if intentional or not, to exclude

community representation. This leads us to understanding how political actors and their policies influence the energy industry.

Regardless of whether an electric utility is organized as a public or private entity, they both tend to behave quite similarly. The existing structural design of a public or private utility is not especially responsive to the community's voices. Although municipal-owned utilities claim that their governing boards (such as the five members representing LADWP) keep them accountable to the public, it is not conducive to get the common people's voices heard (Jurewitz, 2017). Remunicipalization is the act of reforming governing institution to include more local voices, which I will cover in Chapter 4.

In addition to rigid structures of public and private utilities, the wave of deregulatory electricity policy led the country in the direction of building new generation plants based on lowest cost while ignoring environmental costs. This dynamic favored the construction of new combined cycle gas-fired generation plants that burn fossil fuel (Jurewitz, 2017). As the electricity system became more heavily intertwined with our commercial economic system, the interconnectedness of the macro-grid was viewed not so much as the extension of a needed public service but rather as just another commercial commodity (Jurewitz, 2017).

A State of Deregulation

In the 1970s, the United States' economy sought out deregulation in all forms of industry (Timney, 2004). During Carter's administration oil prices were at the forefront of energy policy, in which lobbyists promoted deregulation. Furthermore, when the Reagan administration came into power, energy policy infrastructure surrounded deregulation; one of his plans included the

elimination of the Department of Energy. Deregulation continues to persist in contemporary electricity policy, which also remains to serve economic interest and not the complex interest of the common people (Timney, 2004). In the following section, I will highlight the Energy Policy Act of 1992 and Energy Policy Act of 2005, in which deregulation supported a constant economic growth model, contributing to an economy dependent on extractivism.

Deregulation became prevalent in energy policy to debunk a “natural monopoly” model, and promote a free-market electricity industry that also abided by state laws. English economist John Stuart Mill (1848), studied natural monopolies and their role in political economy. He looked into the “nature” of natural monopolies, such as what is “natural” about it. Natural monopolies consist of industries that encourage one company to take over because of the inability to reduce the total cost of production, and massive infrastructure operations making it difficult to enter to the market (Mill, 1848). The United States’ energy electricity generation and distribution system is a natural monopoly, forming barriers of other energy utilities to enter the market. To challenge forms of monopolization, the federal government created the Federal Energy Regulatory Commission (FERC). Its goals was to restructure the energy industry, allowing distribution access of energy to diminish the possibilities of energy monopolies (Tomain, 2011). Additionally, FERC made an effort to promote electricity choice to oppose monopolistic, industrial forms.

The Energy Policy Act of 1992 (EPAct 1992) fostered energy security plans and opened a market to non-utilities. Under this act, FERC authorized non-utilities to sell renewable electricity on the macro-grid (Timney, 2004). Because of additional competition prior to 1970, utilities encouraged energy consumption in result to higher energy costs (Timney, 2004). In

addition to promoting the fossil fuel industry, this act called for subsidies and deregulation on natural gas. The act expanded a tax relief and added credits to the hydraulic fracturing industry, and pushed for Research and Development (R&D) on “clean” coal technologies. EAct 1992 intentionally framed natural gas as a healthier alternative energy source compared to coal (Energy Policy Act of 1992, Public Law 102-486, 102nd Cong, (1992)). Although there was an introduction to renewable sources of electricity, deregulation encouraged fracking, an extreme extractive process to gather fossil fuel materials (Short et al., 2015), and high energy costs.

In 2005, another energy policy act sought out to build more energy infrastructure due to the perception that energy growth meant a robust economy. Stern (2004) presents a mainstream economic model that suggests a dependent relationship between the energy and economic growth. A growth model hypothesis suggests that *more* oil refineries, *more* pipelines, *more* nuclear power plants, coupled with an efficient grid is closely synonymous to a growing, healthy economy (MacGillivray, 2016). This growth mindset was later exposed during President Bush’s speech as he signed the EAct 2005.

I want to remind you about the fact that this economy of ours has been through a lot. And that’s why it was important to get this energy bill done, to help us continue to grow... This economy is strong, and it’s growing stronger... - President Bush signs Energy Policy 2005

EAct 2005 supported the fossil fuel industry by leasing federal land and work on “clean” coal power initiatives. EAct 2005 exempted hydraulic fracturing from many environmental protection laws, including the federal drinking water measures (Burlison, 2012). With increased media attention on the environmental impacts of hydraulic fracturing, the

deregulation of federal drinking water measures became a scary reality for communities across the United States. In addition, renewable energy research and development was introduced in the policy's budget (Energy Policy Act of 2005, Law 58, 109th Cong (2005)). From EPA Act 1992, deregulation strengthen in energy policy regardless of the harm on the environment and people. These policies were prime examples of how deregulation politics carried a motivation to promote an extractive economy, based on rhetoric surrounding energy security and economic growth.

Trillions of investment dollars are put into the electricity market (Tomain, 2011) and many political figures are tied to fossil fuel money. Stern (2004) describes the Basic Growth Model representing an upward correlation between the country's GDP and energy output. Energy is the ability to do work. With an increase of economic activity, measured by gross domestic product (GDP), many economists predict a coincidence in increase of energy consumption. Growth in urbanization and globalization contributed to the increase of energy consumption (Lovins, 1977). In fact, Energy Information Agency (EIA) predicts an increase of economic growth forming the projection of energy to increase by 11% (2017). The dependent relationship between the nation's energy system and our economy shares insight that these two properties, function in similar - if not, through the same systems. The literature surrounding energy consumption is often times coupled with understanding GDP and economic growth.

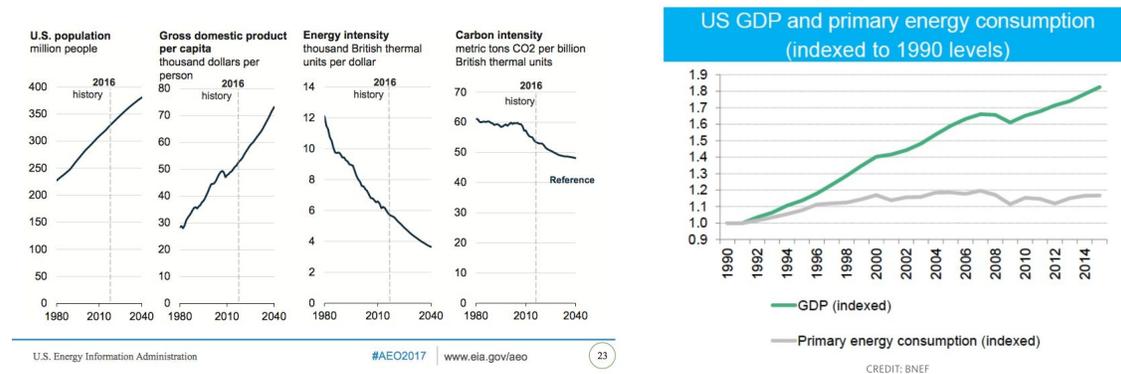


Figure 1.4 The two images illustrates the trends of US GDP and energy consumption. Note that the graph from the U.S. EIA is from 2016 data collection, and the graph from BNEF represents levels from 1990-2014. Source: the left from U.S. EIA and the right from Bloomberg New Energy Finance

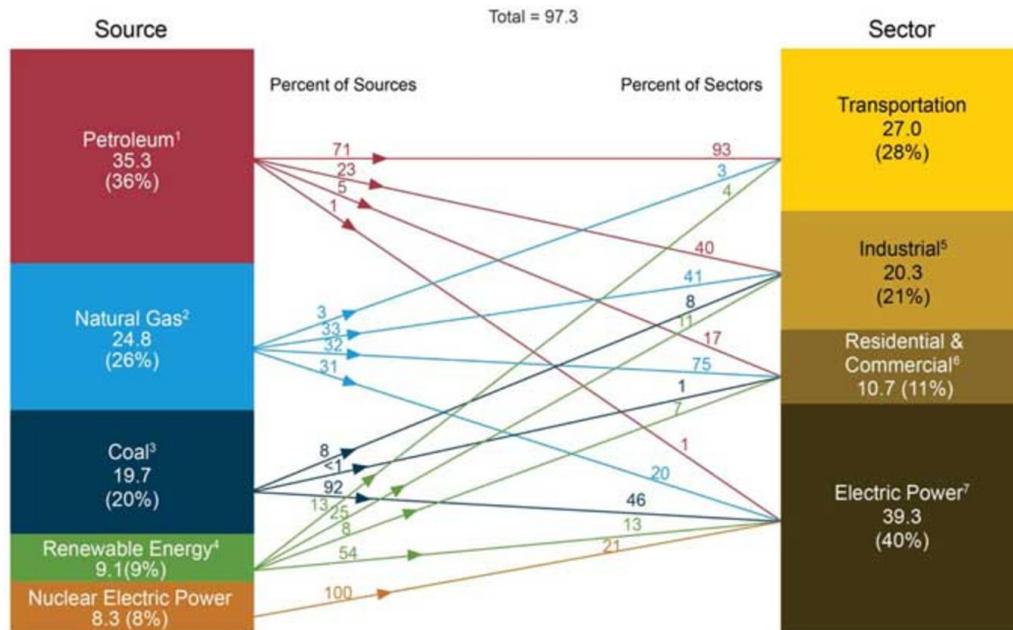
Referring to policies such as EPAct 1992 and EPAct 2005, its objectives include supporting a rapidly growing fossil fuel industry in hopes to grow the country's economy. This assumption proves false as GDP increases, the energy intensity/ consumption decreases or remain stable (Figure 1.4). The graph to the right showcases that the 2008 recession made a dent in both energy consumption and GDP, but in the past five years GDP increases while energy consumption remains quite stable (Figure 1.4).

This constant message of "growth," is part of a capitalist language that continues to support productivity rather than social and equitable justice. I argue in the next chapter that productivity in a capitalist framework advances industries such as clean technologies, yet disenfranchises communities of colors even further. Growth is only concentrated where power is concentrated.

Extractive Economy

Because of an opaque electricity governing body (private and public utilities) in addition to a continued wave of deregulation energy policy, the country's economy and policy-making has close ties to government officials (Short et al., 2015). The country's extractive economy is bolstered by the fossil fuel industry.

The main form of energy consumption in California is natural gas, a fossil fuel found deep underground in layers of rock formation. The United States has a large appetite for fossil fuel, consuming about 25% of the world's resources, while representing 5% of the world's population (Worldwatch Institute, 2016). Post WWII, a spike in urbanization occurred when highways and suburbs developed. These two components were elemental in the consumption movement after the war. Demands of energy, specifically an increase of coal-fired electricity to cool and warm homes, dramatically increased after World War II (Tomain, 2011). Most of the nation's electric power comes from coal and natural gas (Figure 1.5). These two sources of energy include intensive labor both from people and technology. Because of the close relationships between the government and extractive industries, fossil fuel industry continues to be a dominant source of electricity generation (Short et al., 2015). This thesis is not a comprehensive study on the fossil fuel industry, but rather a focus on a new energy democracy model that does not promote an extractive economy.

**Footnotes:**

- ¹ Does not include biofuels that have been blended with petroleum—biofuels are included in "Renewable Energy."
- ² Excludes supplemental gaseous fuels.
- ³ Includes less than 0.1 quadrillion Btu of coal coke net exports.
- ⁴ Conventional hydroelectric power, geothermal, solar/PV, wind, and biomass.
- ⁵ Includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants.
- ⁶ Includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
- ⁷ Electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes 0.1 quadrillion Btu of electricity net imports not shown under "Source."

Figure 1.5 Annual energy consumption based on energy source and its distribution based on sector. About half of electric power in the United States comes from coal. Source: Environmental Information Agency (EIA), 2016

Public and private energy utilities lack local representation, while federal political actors continue to determine energy policies in a deregulatory manner. Deregulation of gathering resources and laws on safety and transparency shows an “extreme energy agenda” the country promotes (Sweeney, 2013). In the current energy discourse, resources that help generate electricity are seen as an economic value rather than a public good for all people to sustain themselves. I will describe in the next chapter that this is harmful to communities of color specifically.

Chapter 2: United States' Energy System Harming Communities of Color

This chapter is an analysis of the first chapter's claim that electric utility industries are embedded in capitalist framework, supporting exponential growth and productivity. This section will deconstruct the ramifications harming communities of color. I choose to focus on how the mechanisms of technological advancements further a knowledge gap on communities of color, and how costs impact low-income, renters of color in a systemic discriminatory institution.

In the previous chapter, I described an energy system as it flourishes under an economic growth model. Conservative politics have encouraged fossil fuel deregulation since the Reagan era, which has allowed the fossil fuel industry to thrive under steady economic conditions. The energy system was formed as regional monopolies which became national monopolies (Weinrub, 2015), allowing only a handful of powerful organizations to determine the present and future of energy. Additionally, those who possess high social and economic capital profit most of the current energy system (Ottinger, 2013). Based on an understanding of deregulation in energy policy, the economic system utilizes growth rhetoric and supports energy policy that places

productivity over people. At the other end of the spectrum are communities of color suffering on account (Bullard, 1997). We are governed by the very things that we depend on to sustain our modern lifestyles. I choose to focus on communities of color due to already entrenched undemocratic processes that exist, including social and economic capital.

American philosopher John Rawls in the 1970s introduced a thought-experiment to encourage morality in American policy-making. Rawls first describes a veil of ignorance by setting up a framework in which a person does not know their gender, race, or class. How would an individual shape policy on distribution rights through the veil of ignorance (Rawls, 1997)? Assuming the veil ignorance, our policies should be informed to include communities of low social, economic, political status. The veil of ignorance theory provides a metric for the overall health of the energy infrastructure, as it encourages to intentionally include communities of color or people born into less political, economic, and social capital. In chapter 1, I exposed the energy system that is founded on capitalist ideas such as constant productivity and an economic growth model. Understanding our energy system in a structural lens is important for us to find a structural solution.

As the previous chapter delved into unpacking the current energy structure, I will further construct my argument by detailing the direct harm on communities of color. The energy system is systemically oppressive because of one, the United States' economic system centering productivity and growth favors technological advancements in the environmental movement which further creates a knowledge gap, and two, the systemic constraints targeted to renters of color.

The environmental justice framework challenges forms of injustices through an institutional racism lens. It is through institutional racism that we begin to realize that equity is more crucial than equality. Equity is the pursuit of fairness, and based on the circumstances given, what are the needs to achieve fairness? Equality is the idea that all people are equal and therefore should be given the *same* amount, resulting in this idea of fairness (Figure 2.1).

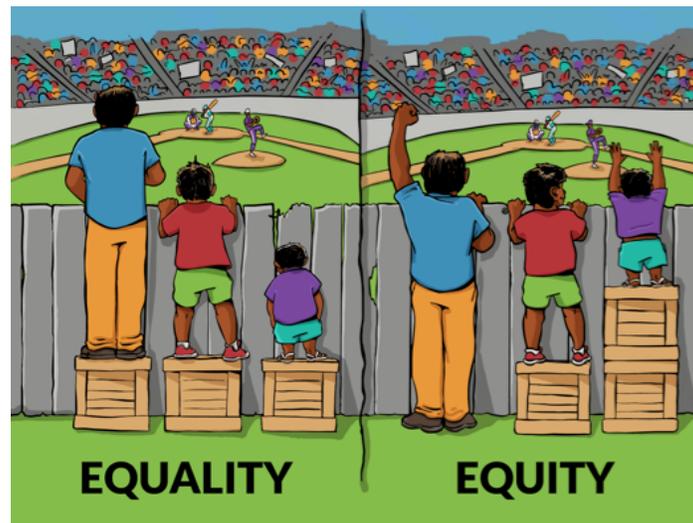


Figure 2.1 A visual representation showing the difference between equality versus equity. Source: Interaction Institute for Social Change, Artist: Angus Maguire

Environmental justice scholars emphasized the need to study systemic and structural racism, instead of direct, individual forms of racism (Bullard, 1990; Taylor, 2000; Pulido, 2000). This environmental justice framework allows environmentalists, scholars, academics, and economists to critique the macro-grid energy system through a structural lens.

Procedural Injustice in Technology Sector

The energy grid is complex, especially the tangle of the political, economic, social, and environmental implications involved across the world. Energy reform is becoming more prevalent in the dominant environmental movement, especially as fossil fuels begin to deplete and a demand of energy independence arise (Gohlke et al., 2008) In addition to this recognition, renewable energy have become more accessible as technology improves scalability and efficiency. Technologies that improve or regulate environmental consequences, also known as “cleantech” are rapidly growing as consciousness of the need for renewable energy infrastructure exists. Cleantech is one approach to creating an environmentally conscious world, and designed only for those possessing high social and political status. Bullard (1997) argues in order to pursue seriously an environmental justice agenda, the environmental movement must look at procedural inequities. These inequities determine who gets to create knowledge and be placed in a power of position.

According to environmental justice scholar Gwen Ottinger (2013) scholarship in the sciences perpetuates environmental injustices because it augments the gap of those who can afford or access clean technologies versus those who cannot. Stern (2004) explains that the neoclassical growth theory continues economic growth through technological progress. Energy systems are vast, rigid mechanisms situated in already capitalist structures; therefore community knowledge is not a priority. It is often strategically avoided (Ottinger, 2013). The expedited forms of clean technologies do not include the needs and wants of communities of color or low socioeconomic communities. Clean technology companies greenwash their products and services, which does not always translate to producing socially and politically just solutions.

Cleantech and socially-just environmental decisions are not mutually exclusive. In the green movement, technologies are seen as “environmentally innocent,” but for vulnerable communities these technologies are inaccessible due to their lack of political and social capital (Ottinger, 2013).

Decision-making and regulatory structures privilege expert knowledge over local knowledge (Fischer, 2000; Ottinger, 2010); this *procedural injustice* continues to keep communities of color from ever producing knowledge. In which this procedural injustice results in challenging who gets to make decision and have power. It is difficult to decipher which decisions in technological advancement are directly empowering communities if community voices are not represented in the first place. This methodology furthers inequities, and we must ask the question: how does such blanket support for an environmental movement further disenfranchise communities of color? Furthermore, we are potentially ignoring contributions made by individuals of color.

The energy industry produces energy for its customers and provides profits to their shareholders, and the collateral damages of these actions not only harm the local ecology and also impact communities of color. The current US energy system prioritizes these technologies producing efficiencies and profits over people. In order to contest climate change, diverse approaches are essential to achieving solution. A whole solution must include everyone, and therefore focusing on communities of color (Giancattarino, 2013), who have for too long been left out of the discussion and in the dark, is imperative.

Renters of Color

Inaccessibility to knowledge constrains homeowners and renters within the energy system, unable to enact institutional changes. I will demonstrate how the energy system is undemocratic, as it adversely affects communities of color specifically. The renting market in city centers show a large growth in renters of color. I will question if racially-coded costs exist in the renting market, and if they cause economic burdens on renters of color.

In the United States, renter-occupied households make up 35% of total households, whereas owner-occupied homes makeup 65% (Table 2.1). According to the US Census Bureau data, in 2009 a white person has a 25% chance of renting, whereas a latinx person has about a 52% chance of renting in the United States (Figure 2.2). A latinx person is twice as likely to be a renter, than a white individual. Black individuals have a 54% chance of renting, in addition to an Asian individual at about 40%, the lowest percentage among all minority groups (Figure 2.2).

| U.S. Households- Renters & Owners | | | | |
|---|-------------|-----------------|-------------|-----------------|
| Type of Household | Households | % of U.S. Total | Residents | % of U.S. Total |
| Renter-Occupied | 43,701,738 | 37% | 111,118,927 | 35% |
| Owner-Occupied | 74,506,512 | 63% | 202,228,998 | 65% |
| Total | 118,208,250 | 100% | 313,347,925 | 100% |
| Source: 2015 American Community Survey, 1-Year Estimates, US Census Bureau. Updated 10/2016 | | | | |

Table 2.1 Owner-occupied households make up most of the United States households, representing a total of 63% in all of the United States. Source: US Census Bureau, conducted by American Community Survey

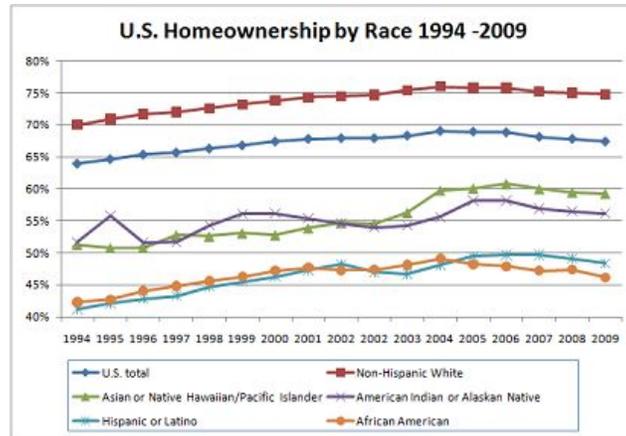


Figure 2.2 U.S. Homeownership by Race 1994-2009. According to 2009 data, African American individuals are the least likely individuals to own homes, whereas white individuals are most likely to be homeowners. Source: United States Census Bureau, Housing Vacancies and Homeownership

According to a study conducted by the Joint Center for Housing Studies of Harvard University, renters of color with children are much more likely to live in multi-unit homes and in center city compared to white renters with children (Figure 2.3). From 2001 to 2010, the renting industry grew, adding 3.9 million individuals (Alexander et al., 2011). 81% of the growth were renters of color, particularly the Hispanic population making up 39% and black Americans about 27% of this growth (Alexander et al., 2011). According to the various data, there is a rapid growth of renters of color in multi-units and center cities. The rise of renters of color stems from various factors, including rise of immigration, increase of negative sentiments of homeownership, and an attraction to diversity in cities (Alexander et al., 2011). As the renting industry invites more people of color, I analyze if economic burdens are placed on renters of color. Renters of color experience costs that make an impact on their income and in result, their livelihood.

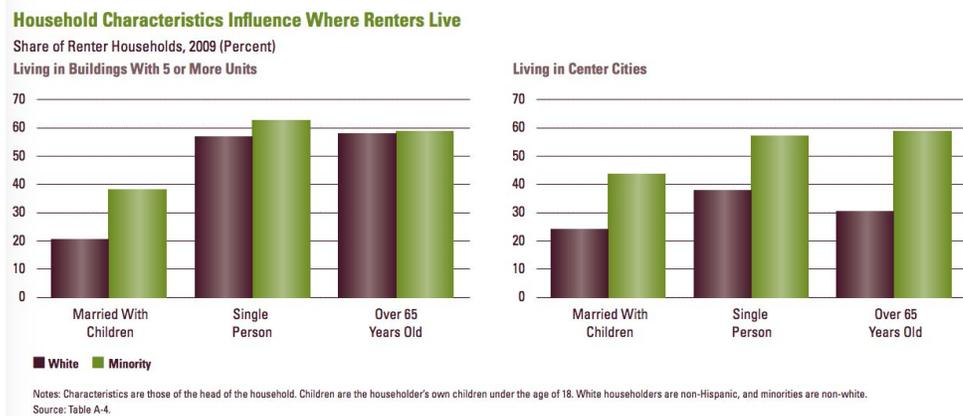


Figure 2.3 White renters in comparison to renters of color in multi-unit facilities and in metropolitan areas. Renters of color married and with children make-up nearly double in multi-unit facilities and in center cities. Source: Joint Center for Housing Studies of Harvard University

Dog-whistle politics is a term to describe racially-coded politics and rhetoric. It was utilized during the Reagan era, veiling racially-rooted issues to target non-white individuals and attract middle-class voters. In the United States, common dog-whistling tactics in politics include the rhetoric around “illegal aliens,” criminals, welfare cheats, and Islamic traditions (Lopez, 2014). Although not as blatant but can be equally as harmful, racially-coded costs apply to renting, imposing economic burdens on communities of color. The two costs that are clearly involved in racial contexts are due to consumption and split-incentives with landlords.

Energy costs are higher in renter-occupied homes. A study conducted by Joint Center for Housing Studies of Harvard University highlights that energy consumption in owner-occupied homes is less than in renter-occupied homes. Per square foot, an owner-occupied home consumes 43,700 BTUs, whereas renter-occupied homes consume 53,400 BTUs. On average, owner-occupied homes pay \$0.99 per square foot, and renters pay \$1.29 in rental units (Carliner, 2013). Contributing factors of higher cost per square foot includes more individuals living in

rented space versus in owned spaces. Because more individuals live in a space, they are more likely to consume more energy exacerbated from the inefficient appliances of their home (Carliner, 2013). Although more individuals may live in rented-occupied spaces, the costs of electricity are based on the amount of consumption regardless of an individual's income. This billing system is based on ideas of equality, rather than equity. Electricity is necessary to sustain modern living, and these costs affect everyone, yet they cause a heavier economic burden on low-income individuals. An individual with low income dedicates 21% of their income to electricity bills, which will make a huge impact on someone of a lower income. In comparison, a higher-income individual spends 15% of their income on electricity bills. Carliner (2013) highlights that although energy use is a necessity it does not change proportionately due to someone's income. This burden of economic cost is exacerbated because of older facilities that people of color occupy.

Older homes and structures are not energy efficient, and can cause a spike in energy use and therefore increase energy costs. Homes built before 1940 consume 72,100 BTUS, whereas home built in 2000s consumed 41,700 BTUs per square foot for rental units (Figure 2.4). Older rental homes are less-maintained and do not provide energy efficient appliances, systemically putting renters of color in an inflexible, undemocratic situation. For example, owner-occupied spaces are 20% likely to be well-insulated, than rented spaces (Gillingham et al., 2011). Based on the likelihood of a person of color renting (US Census Bureau), they are likely to live in a less energy efficient home. In addition to energy efficient discriminatory practices in the renting market, split-incentives refers to the conflict of interest between landlords and tenants.

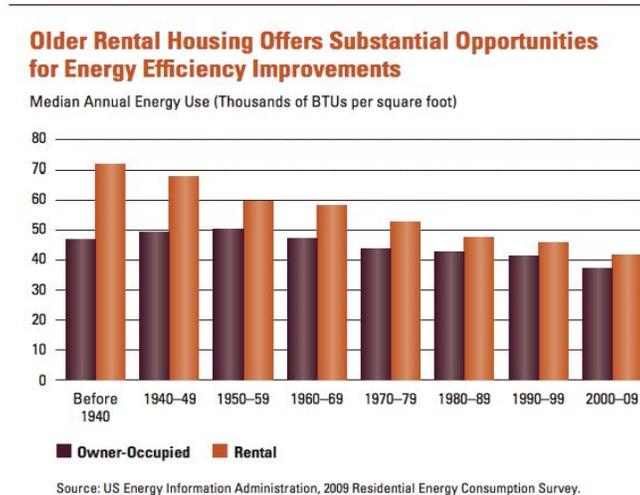


Figure 2.4 Older rental housing costs are higher than owner-occupied housing due to higher annual energy use. Before the 1940s, there is a larger difference of energy use between owner-occupied facilities versus rented facilities. The gap lessens as time progresses. Source: US Energy Information Administration, 2009 Residential Energy Consumption Survey

Split-incentives are the misalignment of incentives between landlords and tenants, leading to overconsumption of energy (Gillingham et al., 2011). Property owners and landlords make poor energy-efficient decisions because they are profiting from renters with higher energy bills (Carliner, 2013). This overconsumption is made to further to systematically discriminate renters of color.

To conclude, renting is a diverse industry that supports many renters of color in bustling, metropolitan areas. A productive, growth obsessive economy places attention on the advancement of new clean technologies, furthering disenfranchisement on communities of color and socially-just environmental solutions. Additionally, poor energy efficient design and appliances alludes to increase energy consumption. With the increase of use, energy costs will go up as well. Inefficient structures coupled with a split-incentive problem demonstrates that the electricity costs are racially-coded.

A Need for a Social Justice Paradigm

Capitalist ideologies on growth and productivity favors technological advancement rather than social and political equity, instilling a knowledge gap between technology and communities of color. For instance, adding scrubbers to coal power plants or advocating for lowering carbon dioxide will not address the social and political injustices of the environmental movement (Ottinger, 2013). Additionally, racially-coded costs of inefficient buildings burden particularly renters of color. Based on these two arguments, an electricity system founded on social justice principles is critical.

According to environmental justice scholar, Dorceta Taylor (2000), a paradigm is a body of ideas that help form social opinions and assumptions of what people think day-to-day. A dominant social paradigm is the common worldview of beliefs. It is difficult to change the dominant social paradigm because individuals and communities are closely involved with these ideas and beliefs (Taylor, 2000). Furthermore, a paradigm is not necessarily dominant because most people believe in it, but because powerful individuals and organizations have power to express their beliefs loudly, or have entrenched ties to the economy. According to Gallup Poll published in March 2016, 64% of Americans are worried about climate change, but those who deny climate change are tied to powerful fossil fuel industry, which directly shape the dominant social paradigm (Saad and Jones, 2016).

One of the paradigms that the energy industry is nested in is the exploitative capitalist paradigm (Taylor, 2000). The exploitative capitalist paradigm does not share end goals of environmental preservation and sustainability, but rather pursues to profit on natural resources. Politicians and resource managers are protecting their interest, preventing change to occur in the

system (McCay and Acheson, 2010). If these capitalist structures are preventing change, then change must occur in anti-capitalist forms. According to social activist Grace Lee Boggs, communities can act as a spiritual center for individuals. Centering communities and their local knowledge in systems that are rooted in industry, moves the country away from the exploitative capitalist paradigm. Energy democracy is an evolving framework that has adopted environmental justice principles. It promotes intentional community-based developments that re-shifts power from extractive processes to regenerative production by communities.

Moving forward to solution-based discourse in the next chapters, I will explore three questions based on the energy democracy movement. One, what is missing in the energy democracy literature that can help strengthen the process to mobilize communities of color? Two, what does *reclaim* mean? And three, what are the components needed to mobilize communities of color to reclaim their public right to energy? These three questions will be the basis of a new energy democracy model focused on property and people.

Chapter 3: Literature Review- Energy Democracy

The previous chapter describes the structure and players involved in the energy system, in addition to who the system benefits and harms. The literature review introduces a newly formed political and environmental ideology developed by several environmentalists and worker's rights activists in 2012. It promotes long-term, clean energy structures generated by local government and communities.

Energy democracy is an environmental and political ideology based on resistance, reclamation, and restructuring of the energy system away from the fossil fuel industry (Sweeney, 2012; Giancattarino, 2013; Weinrub, 2014). The root of the energy democracy movement exists in the resistance to the toxic fossil fuel industry, reclaiming social ownership, and restructuring to the United States' current extractive energy system. Environmental justice scholars, environmental sociologists, economists, and energy analysts blame the archaic and capital-intensive energy system for increasing symptoms of climate change such as warming of the Earth (Sweeney, 2013). Given the context of our macro-grid system as it functions in capitalist structures begs the question: can our current energy infrastructure support a just transition to clean energy? Energy democracy scholars argue that a revival toward community

ownership of our energy infrastructure is necessary to promote an environmentally equitable country (Sweeney, 2012; Giancattarino, 2013; Weinrub, 2014; Weinrub, 2015; Sweeney, 2015). The following literature will address the various approaches to achieving energy democracy. The country is waking up to forms of injustices in our energy system. Energy democracy is a collective-oriented solution that supports communities of color in reclaiming their right to knowledge and property of natural resources. I will review the environmental justice (EJ) framework, an approach designed to talk about the relationship of a person's positionality (race, gender, and class) associated with the environmental consequences. I will then review the most prevalent scholarly sources regarding energy democracy. We will distinctly look at the various approaches to practicing energy democracy, and conclude with an understanding of property politics and the reclaim movement.

Energy in the Environmental Justice Framework

In the 1980s the environmental movement shifted from mainstream, white-centered conservation efforts to recognizing the needs of communities of color in urban settings. Environmental sociologists found differences in where environmental dialogue and knowledge existed (Gould et al., 1996). Environmental justice scholars suggested that the environmental discourse infiltrated white college-educated communities, not communities of color. The idea of "social location" emerged as a form of understanding space and positionality of a person based on gender, race, and class (Taylor, 2000). This idea additionally gave insight to an individual's political involvement (Bullard, 1990, Hamilton, 1995, Taylor, 2000, White-Newsom, 2016). EJ communities were targeted as spaces that were socially and economically "backwards" coupled

with low political involvement by the community (Bullard, 1990). Race and class are core to the environmental justice literature, and therefore in this framework, we are able to critique how the energy system is further exploiting particularly low-income, communities of color located in industrial and polluted hot spots (Pulido, 2000).

Energy Democracy

Energy democracy, a term coined by the Cornell Global Institute, became the spotlight of conversation at a roundtable on international worker's rights and labor unions in 2012 (Sweeney, 2012). Several prominent organizations have picked up interest in pursuing energy democracy, but with various approaches and underlying objectives. According to Director of Policy and Strategy at Center for Social Inclusion (CSI) Anthony Giancattarino, energy democracy is the reallocation of resources to form sustainable energy systems, rather than reactionary, short term development (Giancattarino, 2013).

The groundbreaking scholars of energy democracy are Sean Sweeney, Anthony Giancattarino, and Al Weinrub. Sweeney has dedicated most of his work to form a compilation of radical, energy literature on the Trade Unions for Energy Democracy platform. Sweeney (2015) recognizes the extractive tendencies of our current energy system, and calls for total social ownership and democratic control of the generation and consumption of energy. Trade Unions for Energy Democracy adopts a Marxist lens, piecing a new perspective on worker's rights and trade unions to the energy democracy discourse (Sweeney, 2012).

On the other hand, Giancattarino (2013) representing the Center for Social Inclusion (CSI) weaves in the element of race and class into energy democracy. Racial inequity, framed under

the EJ movement, is pertinent to his arguments (Giancattarino, 2013). People of color have been historically disenfranchised in the political process such as accessibility to voting as conflicting parties continue to question citizenship and personhood of persons of color (Brown and Clemons, 2015). Transparency of knowledge and representation have historically continued to harm people of color, even as they have become a majority in the United States (Giancattarino, 2013). Understanding who continues to be harmed today, and who has been historically impacted by the country's energy structures must be explicitly described for an honest progression to energy democracy.

The third body of work significant to the larger literature of energy democracy is by Al Weinrub, renewable energy activist and writer. He is also one of the coordinators for Local Clean Energy Alliance housed in the Bay Area. Weinrub (2014) takes on a logical approach in movement building. His work places emphasis on promoting a network and directory of organizations, instead of only understanding the nature of worker's rights and trade union partnership. In addition to forming a network of organizations that align with the values of energy democracy, Weinrub (2014) acknowledges the institutional approaches in utilities. His work outlines strategies to achieve democratic control of energy such as collective/ cooperative ownership, feed-in tariffs, and community choice energy. His report, *Expressions of Energy Democracy*, describes the current policies and technical approaches for those wanting to mobilize the energy democracy movement right now.

Additionally, Giancattarino and Weinrub (2015) wrote *Toward a Climate Justice Energy Platform: Democratizing Our Energy Future* to merge the strengths of their approaches, racial inequity and logistically preparing for a democratized energy future. Their work highlights the

violent beginnings of resource exploitation when settlers took ownership of indigenous land. Recognizing oppression and exploitation of resources is entrenched in United States' environmental history which questions whether we can realize an equitable future against corporate energy agenda and extractivism (Giancattarino and Weinrub, 2015). This question is further debated in their work, in addition to feasible steps on financing and maintaining a community based renewable resource development.

These energy democracy activists are all tied to organizations: Trade Unions for Energy Democracy, Center for Social Inclusion, and Local Clean Energy Alliance. Even though there is a diversity of approaches from these three scholars, energy democracy is an emerging movement and scholarship is actively evolving. In this thesis, I am contributing to the energy democracy discourse by connecting political ideologies of reclaim and public ownership, and its efforts to center communities of color for equitable, decentralized energy systems. As I show in the next section, the literature in property politics below, has mainly revolved around water and conservation efforts, but can be applied to the energy system.

Property Politics to Collective Ownership

In the following chapter, **Chapter 4: Property Politics and the Cultural Commons**, I will go into detail the need to refocus the energy democracy literature to property. The two works that helped me formulate a new energy democracy model centered on property are political thinker, John Locke in his book *Two Treatises of Government*, and Nobel Laureate for economics, Elinor Ostrom's Institutional Analysis and Development Framework on the Commons.

In the early eighteenth century, Locke's writings on property became the basis of America's institutions on private property. Locke's (1703) workmanship theory explained that individual property comes from the individual themselves exercising labor. *Second Treatise of Government* pushes the boundaries in understanding utility and its limitations to an individual. The United States adopted Locke's ideologies during "manifest destiny" when white settlers were expanding the western frontier while developing the land in addition to the country's character (Reisner, 1993). Locke's workmanship theory attracted many scholars, including German philosopher and socialist, Karl Marx. In his three volume, *Das Kapital (Capital)*, he shares similar ideas with Locke in regard to rights and entitlements. Workers are denied the fruits of their own labor because the capitalist system divides labor. The division of labor is the process of alienating ourselves from our work, which ultimately limits the highest attainable goal: individual freedom (Marx, 1906). Marx's revolutionary ideas stemmed from Locke's theories of valuing labor and workmanship. Locke brewed ideas of individual property, and Marx took his philosophy about labor and spun it into understanding collective identity made up of workers. These ideas are elemental to the energy democracy literature as it pertains to property politics and a step towards reclaiming community and social ownership.

American political economist, Elinor Ostrom (1990) is recognized for her collection of longitudinal case studies that demonstrated the success of common pool resources and collective property. Ostrom (1990) rebutted against economist Mancur Olson Jr.'s *The Logic of Collective Action* (1965) and environmentalist Garrett Hardin's *Tragedy of Commons* (1968). Olson (1965) and Hardin (1968) argued against the feasibility of communal property because of individual greed. They argued that personal interest prioritizes over community incentives. In contrast,

Ostrom (1990) formed models founded on reliable policy, culturally appropriate strategies, in addition to structure of institutionalized communal governance (Ostrom, 1990). Ostrom paved way for communal and social ownership in regards to water rights (Skinner, 2015) and conservation management. Her work became seminal, in addition to Locke and Marx theory, to understanding how to feasibly reclaim from private ties to public property and social ownership. Energy democracy activists discuss surface-level the importance of reclaiming, yet Ostrom's work can bring insight on how to promote total democratic control. Utilizing Ostrom's model is one way to approach an overarching goal for a representative energy system. Energy democracy activists identified two main approaches that can be seen in conflict of one another. One is rooted in business and corporate structures, and the other approach re-examines the fundamental problems and breaks away from these frameworks to focus on equity.

Two Approaches to *Practicing* Energy Democracy

The two approaches found in most solution-based discourse on sustainability and the environment are ecological modernization strategies and climate justice. Weinrub (2014) argues that the de-carbonized growth strategy an intersection of economic and sustainability efforts, does not get to the root problem. This strategy from ecological modernization is an optimistic school of thought involved with theories of political sociology (Buttel, 1999). Ecological modernization stems from the thought that modernity can be achieved through sustainable practices within the current economic systems. Some sociologists have referred to ecological modernization as sustainable development (Buttel, 1999), ecological commerce (Hawken, 1993) green growth, or exploitative capitalist paradigm (Taylor, 2000). Corporate entities have

implemented “corporate social responsibility,” to make up for their irresponsibility to the environment and people. The ecological modernization literature lacks insight into the root inequities of our economic system and its efforts to support communities of color. This point of view further perpetuates that the environment, particularly our natural resources, can be commodified and managed by industry, such as technological industries (Mol et al., 2009). Energy democracy scholars assert that the optimism of ecological modernization is harmful in mobilizing all people to achieving energy democracy because it thrives under the very system that is perpetuating extractivism. Ecological modernization is a form of capitalist expansion, and does not support the movement of sustainable and inclusive practices of the environmental justice movement (Sweeney, 2017).

Whereas, the climate justice strategy is supported by grassroots organizing from people, demanding accountability from the United States’ government (White-Newsome, 2017). The climate justice approach builds off of the environmental justice framework exposing the relationship between social location and accessibility to healthy living, especially in vulnerable communities such as black communities (Taylor, 2000; White-Newsome, 2017). For example, environmental justice scholar, Robert Bullard begins the EJ discourse in 1990s to talk about the dumping of toxic waste in black communities (Bullard, 1990). This was one of the first academic exposure to environmental justice affecting black communities in the United States. In reflection, this thesis also takes on a racial lens in understanding equitable energy systems.

Energy democracy aligns with the climate justice approach, hoping to reform the economic system away from capitalist structures and *reclaimed* in community-based knowledge (Weinrub, 2014). An alternative method to move away from profit to people’s needs is the

promotion of social ownership. Cock (2015) discusses the need to struggle over public ownership as people reclaim their goods, or a “just transition” will be one founded on capitalist ideologies. This critique links back to how an ecological modernization approach will not fulfill the needs of the people. The common need is a transdisciplinary approach (Kunze and Becker, 2015) to developing community empowerment through access and practice (Mingus, 2010) of collective-action property.

| Category | Climate & Economic Justice Strategy | De-carbonized Growth Strategy |
|------------------------|--|---|
| Analysis of the Crisis | The economic and climate crises are inextricably linked—an integrated crisis reflecting the collision of globalized capitalism with the Earth’s ecological limits. | The climate crisis is separate from the economic crisis. This implies that the climate crisis can be resolved without addressing the economic crisis, and <i>vice versa</i> . |
| Solution to the Crisis | Replace the globalized capitalist system and its inherent growth dynamic with sustainable economic development based on renewable energy to meet the needs of human beings, rather than the needs of capital accumulation. | The solution to the <i>climate</i> crisis is to replace fossil fuel energy with renewable energy in order to transition to a de-carbonized capitalism. The solution to the <i>economic</i> crisis is seen as a separate matter. |
| Program | Create an alternative, equitable, social and economic order based on democratic principles and an energy platform that seeks to replace the corporate energy establishment with alternative institutions. | Reduce greenhouse gas emissions—mainly through market mechanisms and new technology, but within the current structure of corporate economic and political power. |
| Social base | Those worst impacted by globalized capitalism: workers, low-income communities, and communities of color | Those who have benefitted enough from the current globalized capitalist system to be economically secure or privileged relative to those struggling to survive. |
| Role of energy | Energy is a resource, a basic enabler of economic life—to be democratized and harnessed to meet human needs and transition the world to an ecologically sustainable economic future. | Energy is a commodity, the basic enabler of capital accumulation and an expanding growth economy, all of which increases the contradictions of the existing economic and political system. |

Table 3.1 Two different strategic framework addressing environmental problems around the world. Weinrub (2015) asserts the benefits and the detrimental effects of the climate just strategy and the de-carbonized growth strategy, rooted in ecological modernization theory. Source: Local Clean Energy Alliance, Al Weinrub

The table juxtaposes the climate and economic justice strategy and the de-carbonized growth strategy (ecological modernization-based), demonstrating the various approaches to addressing energy issues. Climate and economic justice strategy analyzes root, structural causes and believes in uplifting the status of workers, low-income communities, and communities of color (Table 3.1). Stated previously, this strategy is a band-aid solution to climate issues because its goal is to expand capitalist agendas for more productivity, not debunk it. Energy democracy aligns closely with the climate and economic justice strategy, as it promotes to center communities and demote corporate interest.

In addition to institutions that perpetuate capitalist thought of productivity and growth, the system of the commons are critiqued for not supporting community needs (McCay and Acheson, 2010). Many environmental scholars link back to property and ownership as an elemental component to realizing community action (McCay and Acheson, 2010).

Chapter 4: Property Politics and the Cultural Commons

Property theory and communal-ownership practice is needed to move the energy democracy movement forward. I analyze property politics based on, John Locke's book *The Second Treatise of Government* and how that can apply to communally-managed energy systems. Common pool resources and cultural governance have been promoted through prominent scholars such Elinor Ostrom, and social scientists Kunze and Becker (2015). Ostrom (2010) and Kunze and Becker's (2015) work is centered on the practice of collective-based energy. Most of the conversation efforts surrounding the commons applies to water and land, such as water rights in respect to indigenous territories (Garrido and Shechter, 2014) and land ethics to our natural environments (Leopold, 1949). This chapter focuses on energy communal design. This is an emerging topic that can be rooted from water and land conservation and collective-based activism.

Property and ownership are not dominant contributions to the current energy democracy literature. I am arguing for the need to concretely form grounded literature in communal property and collective-ownership. This accumulation of literature will benefit the energy democracy

movement and support the shift towards decentralized energy in the United States. Due to the systemic prejudices in the electricity system, understanding communal property and ownership is a step towards prioritizing the people's needs in their energy consumption. In this chapter, I begin to formulate a model that focuses on property and people. The first component to this model is rooted in understanding property and forming culturally-grounded communal governing institutions.

Throughout United States history, property rights have been instrumental in the way individuals derive significance in American society. Property laws such as the Homestead Act of 1862 were implemented to construct property lines as a form of developing the nation's character. Natural-born Americans and arriving immigrants believed in manifest destiny as they moved westward to occupy pastureland and deserts (Reisner, 1993). White settlers decided on resource allocation because of their status as property owners (Demsetz, 2000). Owning property closely aligned with power and this sentiment still exists today (Reisner, 1993).

Undoubtedly, we are connected, confined, and even defined by the property itself and the surrounding community we live and interact with. Spatial analysis plays an integral role in the environmental justice movement, as we think about how our spaces correlate with access to clean air, water, and education. In the energy democracy literature, community choice as a political tool is often the main dialogue to pursue community autonomy (Weinrub, 2007; Weinrub, 2014). In addition to community choice, understanding the physical community spaces and the commitment to communal ownership has many benefits.

In the following section, I will cover the theoretical and applicable aspects of property and ownership. I argue that an in-depth understanding of communal property and design is

necessary to progress the energy democracy movement. To pursue decentralized energy, restructuring of the energy system from fossil fuel to renewables is the dominant discourse. Although this dialogue is important, it is key to have a firmer grasp on why community property and access to it is important. Examining our country's historical past during westward expansion, we can inform that property gives power, in which community property would invoke local power. Locke (1703) promotes empowerment through physical property, whereas Ostrom and scholars questioning "the commons," focuses on power through institutions. I am arguing to combine Locke's views with Ostrom's analysis in order to gain community entitlement to land and form representative institutions. I will provide a contemporary example that energy democracy scholars have looked to as a solution of communal ownership: remunicipalization.

Workmanship Theory to Reclaim Property

Locke (1703) wrote in the *Second Treatises of Government* within the Property section to challenge the relationship between land property and labor. As mentioned in the literature review, Locke suggested to consider other's needs in the workmanship theory, involving labor and property. Locke introduced a concept, the Law of Nature, as a common law to all citizens. He argued that the Law of Nature respects the differences and rights of others.. In Locke's words, he describes the workmanship theory as "The Labour of his Body, and the Work of his Hands, we may say, are properly his." (Locke, 1988, p. 288). If our own physical self is involved with the process, then we have the right to own it. In fact, Locke measured 90% of usefulness of our resources contributes to labor. In reforming the structure of our energy system from central to decentralized, from monopolized ownership to communal ownership, physical labor of the

community is necessary. When communities are physically involved with the entire process of energy, from production to consumption then they have the right to claim it as theirs.

It is important for communities to apply the workmanship theory because it fosters choice, local control, distributional justice, social equity, community participation, and environmental sustainability (Cumbers, 2012). In comparison to bureaucratic entities, local communities are aware of the native resources and ecological practices. Local decisions based on their knowledge is closer to the real life experiences in the community (Brosius et al., 1997). We no longer need to be left in the dark of the opaque institutional practices that make decisions for our communities. We can create it ourselves with supportive and pro-active institutions in place.

Cultural Commons: Structure and Practice

Environmental scholars have dedicated their studies to redefining, expanding, and challenging communal resources, also known as the commons. The commons refer to a communal property governed by a social institution made up of individuals (McCay and Acheson, 1996). In the literature review, I covered arguments presented by Hardin and Olson that focused on individual-interest in comparison to Ostrom's community-oriented design. Another common misconception is that private property will ultimately lead to the protection of resources. Due to the design of our extractive economy, private property has led to the exploitation of resources (Sweeney, 2013).

Ostrom pioneered how to interact with common pool resources in an intentional and engaging manner. Cultural commons is the relationship between the surrounding natural environment and the knowledge resource of what communities generate (Ostrom, 2010; Madison

et al., 2010). Ostrom's design provides a framework to examine representative institutions that act between private property and state (Madison et al., 2010). Ostrom (2010) provides a set of questions, the Institutional Analysis and Development Framework and the Commons to address culturally appropriate governing systems (Figure 4.2). Institutional Analysis and Development Framework suggests that multiple structures and processes exist, and that one structure does not fit the needs of everyone (Ostrom, 2010). In contrast to the current public and private utility design, Ostrom's model presents multiple steps, including a plan to incorporate communal language for members to easily utilize. Most importantly, Ostrom's view of institutions as flexible entities empowers communities to change them. This is a key element to recognize, as the emerging literature on public ownership is demanding for a pluralistic approach to prioritize the community's needs and wants (Cumbers, 2012). Pluralistic approach depends on the current institutions upheld by the host community. For example, a study was conducted to test the effectiveness of the various forms of public ownership (Figure 1). The different types of public ownership including full state ownership (FSO), partial state ownership (PSO), local or municipal ownership (LMO), employee-owned firms (EO), producer cooperatives (PC), and consumer cooperatives (CC) show positive ratings (Figure 4.1)

Cumbers (2012) advocates for the return of public ownership as a way to support numerous facets of injustices that are exacerbated especially in communities of color. Locke's theory encourages the physical self to be a part of labor, and in result property is gained. Applying workmanship theory to communities, economist and scholar on the commons, Ostrom designs communal institutions for sustainable growth. Creating, managing and maintaining

sustainable institutional structures in a culturally appropriate context is the next step in reforming our energy system.

| Objective | Form of ownership | Rating |
|--|-------------------|--------|
| Commanding heights | FSO | ++ |
| | PSO | + |
| | LMO | + |
| | PC | = |
| | CC | - |
| | EO | - |
| Local community control | FSO | - |
| | PSO | - |
| | LMO | ++ |
| | PC | + |
| | CC | + |
| | EO | + |
| Distributional justice | FSO | ++ |
| | PSO | + |
| | LMO | + |
| | PC | - |
| | CC | + |
| | EO | - |
| Environmental sustainability and justice | FSO | ++ |
| | PSO | + |
| | LMO | ++ |
| | PC | = |
| | CC | = |
| | EO | = |
| Enhance participation/class justice | FSO | = |
| | PSO | = |
| | LMO | + |
| | PC | ++ |
| | CC | ++ |
| | EO | ++ |

Key: + positive effect; - negative; = neutral

Figure 4.1 The different kinds of community ownership and the positive and negative affects. Source: Study conducted by Cumbers, 2012

The framework address two problems: *collective-action problems* such as how to build incentives for people to participate, and *coordination problems*, how to form an effective and productive space. Rules and management are altered due to the diverse cultural practices of the

community. These institutions additionally are not necessarily private nor governmental, and can occur naturally by information interactions - friends, families, and neighbors. The nuances suggest that clear communication and transparency of the institution is vital to the survival and success.

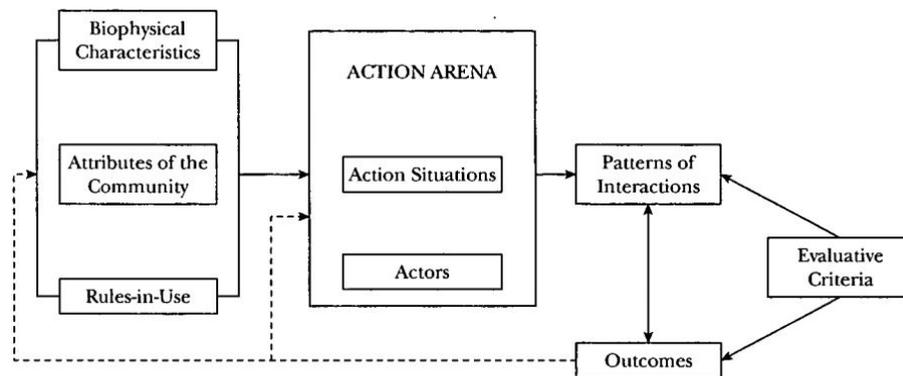


Figure 4.2 A simple illustrative design of Ostrom's Institutional Analysis and Development Framework. Rules-in-Use is noted as government mechanisms or fixed exogenous variables that help govern a situation. For example, governing based on characteristics of fish such as scale color, Action arena is the space where the community participates in exchange or problem solving. This is where interaction among the community occurs. Source: Ostrom, 2010

Progressing forward with Ostrom's framework, the three initial steps to supporting collective-based, common pool resources are the biophysical characteristics, attributes of the community, and rules-in-use (Figure 4.2). Biophysical characteristics include the natural resources in the surrounding area such as groundwater. Attributes of the community include the strengths and organizational structures that the community can contribute to, and rules-in-use are governing attributes to easily identify. In result, these three initial properties are implemented in the "action area." Action situation refers directly to the problem solving that takes place in communal governance. In accordance to the workmanship theory and Ostrom's (2010) institutional design, encourages community members to share resources and to directly engage in

the energy production process. Forming a foundational understanding of property politics and cultural commons is part one of the energy democracy model to inform inclusive energy practices, especially for communities of color. Remunicipalization provides a contemporary example of how electric governing institutions are restructuring their utility by centering community voices.

Remunicipalization to Reclaim

Energy democracy scholars, including Al Weinrub promote remunicipalization, demanding public utilities to act for the people instead of behaving as private organizations with the name of “public utilities.” Remunicipalization in the state of California stemmed from Assembly Bill 117 (AB 117), a push for community choice energy developments. AB 117 outlines the purchasing and selling of electricity, and more importantly community management on the local natural resources. This emerging form of institutionalized, collective-based energy system encourages the community to make decisions on: community investments, jobs, choice of energy source, environmental impact, and prices (Weinrub, 2017).

Transparent options lead to a more democratic energy system. What if these choices made by the community are not clean and renewable? Does this mean that it still aligns with the energy democracy movement? Although most energy democracy scholars promote clean, renewable energy as a way to promote community health, some neighborhoods, cities, and counties depend on the fossil fuel industry, such as coal mining. The model I propose acknowledges community choice as a priority to make choices based on the local resources in the surrounding area, and if the community chooses to exert labor for these sources.

| Community Choice Version 2.0 | Investor-owned Utility |
|--|--|
| Non-profit public agency | For-profit private corporation |
| Purpose is to maximize community benefits: meet GHG reduction, economic development, good clean energy jobs, rate stability, social equity, local ownership and control of energy, and other community benefit goals | Purpose is, by law, to maximize shareholder returns |
| Net electricity revenues remain in the community: to expand services, invest in new assets, build reserves, or reduce rates | Net electricity revenues leave the community as utility profits and shareholder dividends |
| Based on an Energy Service Provider model: provides optimum energy services to community: cuts waste, reduces demand, lowers overall system costs of electricity service | Based on a Utility model: buys and sells electricity to ratepayers; the more electricity delivered, the better ¹⁵ |
| Implements a decentralized renewable energy model: local distributed energy resources are developed to optimize the electricity system, provide stability, and achieve net zero energy | Implements a centralized renewable energy model: emphasis is on expanding infrastructure investment |
| Encourages strong community participation in shaping the program and in governance | Decisions made by utility executives and state regulatory bodies serving the utilities |

Figure 4.3 The table provides information on the different approaches to community choice, promoted in AB 117 versus investor-owned utilities. Source: Al Weinrub in his article focused on remunicipalization, 2017

Because technological advancement widens a gap between those who produce knowledge and those who receive it, communal design is necessary to gap those bridges (see Chapter 2). Communal design challenges these dynamics because those creating knowledge and those receiving knowledge are one in the same. The goal is to have the community participate in forming local knowledge, testing these theories, and applying policy and forming cultural institutions (Figure 4.3). Remunicipalization, the reforming of public utilities to support the needs of diverse needs, is a step toward communities fully reclaiming their energy. For instance, Los Angeles Community Choice Energy is currently undergoing a feasibility study (LACCE, 2017). They are working closely with Southern California Edison (SCE) to form local control over a diverse energy mix, create local jobs, and lower environmental impacts in the community.

An example of a culturally institutional design is LACCE's task force that includes various stakeholders - municipal, labor, and industry that have acted as a focus group. Although this thesis does not cover in detail a case study on remunicipalization, this emerging institutional design is an essential component to reclaiming property.

These claims are supported by Locke's property theory and Ostrom's Institutional Analysis and Development Framework, then the mobilizing of people can happen. Based on Lockean theory, Enlightenment thinker, Karl Marx centers labor and worker's rights in any revolution. In addition, contemporary social activist and environmentalist, Grace Lee Boggs discusses local self-reliance to achieve community well-being. These two revolutionist strongly believed in individual freedom led to community health and well-being. To fully achieve a collective energy system, communities must *democratically* reclaim their right to their own generation of energy. I will further deconstruct the need for reclamation of energy as a public good--a significant step towards an energy revolution.

Chapter 5: A Process of Community Mobilizing

The process of community mobilization is the very act of resisting oppressive political, power structures. Moving forward from property, Chapter 5 will focus on the process of local self-reliance in achieving community power. Karl Marx and Grace Lee Boggs spend most of their activist career in the pursuit of community development. Although written in different political climates, both writers deeply value the reciprocal relationship between individual development and community participation.

Part one of the model includes incorporating property and communal ownership to promote local knowledge in a decentralized, democratic electricity grid. In addition to property and communal ownership, the second part to the energy democracy model that I am proposing is focused on mobilizing communities. From the works of two activists, I will demonstrate that recognizing individual value and local knowledge leads to community empowerment. Karl Marx argues that centering workers and their labor in our economic system is pertinent to exposing an extractive agenda. In addition, Grace Lee Boggs, adds emphasis to local self-reliance to realize community participation.

As mentioned previously in the literature review, energy democracy is broken into three components: resisting the fossil fuel industry, reclaiming energy as a public good, and

restructuring the energy system to provide local decision-making processes. The word is “reclaim” is particularly interesting in that it assumes that something was taken away, and the act of retrieving is necessary. In the energy democracy literature, one assumes what is *it* that was taken away and is needed to be re-gained back to the people.

During my personal interview with Al Weinrub, a social activist and environmentalist, I asked him the difference between the *reclaiming* and *claiming* of our energy system. He said that, “it is about perspective.” He shared that different energy democracy organizations will use reclaim and/or claim in the literature based on the context. Reclaim reveals how capitalist structures and the heavily commodified fossil fuel industry labeled energy as a commodification rather than as a public good. In contrast, the word “claim” is used in reference to the United States’ energy grid system. For example, the United States energy system did not begin with a communal-based structure. The macro-grid was not intentionally designed for communities in the first place. For the purpose of my thesis and to continue the dominant discourse of energy democracy, I will be adopting the word reclaim to argue that the capitalist economic structure that our energy system functions in, has taken our democratic right as citizens to know and make decisions of our energy generation process.

Labor Theory: A Route to “Reclaim”

Locke crafted the workmanship theory proposing individual labor to gain property, whereas, Karl Marx constructed arguments based on Locke to fight for worker’s entitlement. Marx’s main objective was to apply scientific theory to politics (Shapiro, 2011). He blamed the division of labor as a form of individual suppression, rather than freedom. For example, in a

capitalist society production is divided into small tasks. Marx (1906) describes the division of labor as a process in which the worker alienates themselves from the actual work. For example, if a worker only screwed the cap onto bottles thousands of times in the day, the worker is not fully immersed in the product making process. The person then becomes a mundane machine.

Undoubtedly, the division of labor is an engine for productivity. When people are empowered and know that they are denied the fruits of their labor, Marx argues that power for the people will rise. These notions of people property aligns the values to the energy democracy movement. For instance, the energy industry demonstrates monopolistic characteristics such as territory utility ownership (Weinrub, 2015), which Marx notes that crisis can stem from monopolies (Marx, 1906). Monopolistic characteristics such as utilities controlling resources without transparency of decision-making, manufactures pseudo-wants. As division of labor separates workers and their work, how do we truly understand our actual needs and wants. How much of the energy consumed needs versus wants?

Marx's ideas mobilized workers to achieve their fruit of labor. In the model I propose, exposing injustices of the macro-grid while centering community members and their local knowledge will bridge social justice and environmental destruction (Kunze and Becker, 2015). I used Marx to provide background information to construct a proposal emphasizing the need to mobilize the common people. On the other hand, Grace Lee Boggs practiced self-reliance to community empowerment through the form of green, urban spaces.

Self-Reliance to Mobilizing a Community

Grace Lee Boggs has dedicated her entire life to protecting civil liberties and promoting representative, political power especially in Detroit's black communities. Boggs' book, *The Next American Revolution: Sustainable Activism for the Twenty-First Century* (2012) is a platform for Americans to understand revolution as an approachable solution rather than an intimidating route to political power. The last of her activist days, Boggs formed community gardens as a revolutionary, communal space for low-income, communities of color. She advocates that there is no central leadership, but the leadership by the people (Boggs, 2012). Boggs's contemporary culture revolution is the act of weaving indigenous philosophies to achieve social justice in communities, especially communities who have been historically marginalized due to systemic oppression. Her practice was based on the principles of grassroots organizing, ecological sustainability, and **local self-reliance** to promote local knowledge as the basis of institutional restructuring (Boggs, 2012). Local self-reliance is the intentional design of "building local power" (Institute for Local Self-Reliance, 2017).

Local self-reliance is the ultimate goal in the energy democracy movement. The main objective of a new energy revolution is the intentional reforming of our economic structure to emphasize sustainability and local self-reliance. The reclaiming of our electricity generation and distribution system as a community-based energy development is a step towards moving from individual freedom to community empowerment. It is through the **process** of resisting the current toxic structures of the energy system that builds community engagement and ultimately, understanding one's personhood.

Community-energy scholars have defined communities by referring to the space and interest of the locality. The communities themselves are already socially organized and grassroots-led (Seyfang et al., 2013) and therefore sustain themselves through community-led institutions and accountability. For example, energy democracy scholars suggest to build decentralized technology in places that have existing communities; one of these places include churches and spiritual spaces (Sweeney, 2013). While religious, social, or political groups proceed to feel entitled to their property, they begin to form local power within their community.

For example, Oakland Climate Action Coalition (OCAC) is a collective of people of color, low-income individuals committing to greenhouse gas reduction in an industrial hub (Giancattarino, 2013). Their coalition includes a committee of two co-chairs- one that focuses on policy and the other on organizing. Their institution's governing body is made up of community members to "hold the process, itself, accountable to marginalized communities" (Giancattarino, 2013). This process, according to Boggs (2012) of self-reliance, is the process of community empowerment. The diversity of Oakland's coalition brings about rich ideas for movement building. One of these ideas includes conducting workshops for community residents to express their needs in predominantly Chinese and Spanish-speaking neighborhoods. The workshops are conducted in both Chinese and Spanish, and have attracted about a thousand residents to these planning workshops (Giancattarino, 2013). This process invites community members to be dependent on an electric, self-relied development while being dependent on one another.

Democracy is not a bourgeois ideology, but a concept attracted by and for the people. In order to achieve democracy, Boggs calls for a reinvention of culture within the dominant social paradigm. Linking back to Ostrom, understanding that the communities' needs and wants in a

culturally appropriate manner is a step towards engaging socially responsible-grounded activism. An opaque electricity generation and distribution system contributes to our complacency of our electricity grid, therefore a new democracy is demanded calling new forms of responsibility, including more participation around ideas of citizenship. Boggs states that “**self-identity is constructed through engagement with community**” (Boggs, 2012, p. 11). We look to our community to bring us wholeness, but if the physical property and spaces are not readily accessible in the first place (Ostrom, 2010), then the moving of people cannot happen.

According to Giancattarino (2013), communities need to reclaim their energy in three main areas are one, reclaim parts of the energy sector that have been public and are now privatized, two, restore energy operations to serve the communities that surrounding the electricity development, and lastly, reassert a socially-owned, fully unionized, clean energy system. These three goals can be achieved in the model focused on property and people (Figure 5.1). Communal property and cultural commons act as the physical components to produce local knowledge, which then leads to a transparent, inclusive process. At the heart of this model is local knowledge promoting community empowerment.

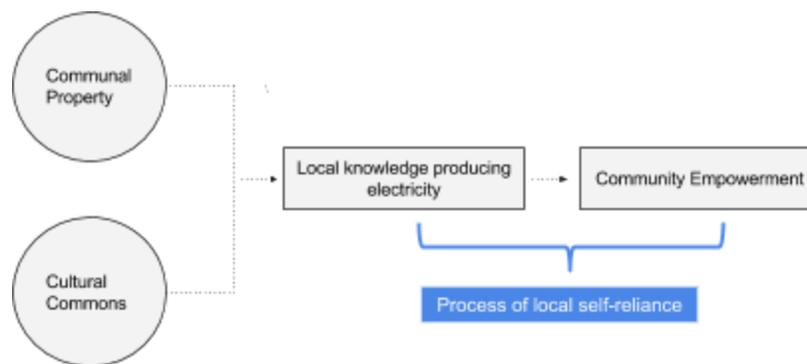


Figure 5.1 An energy democracy model centering property and people. To the left side of the image includes property and flexible governing institutions, and the right side includes the process of local self-reliance. Source: Feby Boediaro, 2017

Critiques

Although Marx and Boggs's ideas on the process of mobilizing stems from similar political spheres, the energy democracy movement can be applied regardless of political ideologies. Due to an attachment of private rights in conservative politics, localism is described as a contribution to healthy communities (Kirk, 1993). Although I focus my study particularly to communities of color, and low-income populations, my study can be applied across the country. In fact, according to a Yale study on Climate Change Communications, 70% of total registered voters in the Republican party believe in supporting regulation on carbon dioxide as a pollutant (Yale, 2015). Local electricity developments can partake in the social, environmental, and political causes to community empowerment regardless of where an individual may fit on a political spectrum. Locality addresses issues that liberal, conservative, left and right wing citizens can feel connected to. Additionally, conservative values are placed upon property as a source of power (Kirk, 1993). According to the energy democracy model, I agree that communal property can act a source of collective power.

Another critique to local self-reliant, community electricity developments is an ecological and environmental issue. Not in my backyard (NIMBYism) is a common environmental response to placing hazardous waste facilities (Heiman, 2007). This argument has extended to any sort of facility, technology, or construction that are perceived undesirable by localities, although socially good (Wolsink, 2000). I am arguing that placing it in the communities, directly "in the backyard" allows individuals to be a part of the process to generate their own energy. Halstead (2009) describes how NIMBYism is applied to waste facilities that affect a community's health, particularly if dangerous for children. Having an electric communal grid

keeps the community accountable to make sure that their energy production is safe for the children in the community. In addition to a safety component, a collective and communal electric design placed in a backyard is an approach to procedural justice. Gross (2007) conducted a study focusing on procedural justice with wind turbines in Australia. The interviewees in the study were consulted about a wind farm pilot study. In the research, participants expressed that ability to be clearly heard, participation, being treated with respect were important to bridging procedural injustices (Gross, 2007). Having the physical facility that produces clean, safe energy while participating in the process of electricity generation and distribution is an example of local self-reliance. Transparent decision-making and community participation bridges these gaps of procedural injustices.

Conclusion

To begin, the United States' energy generation and distribution system is governed by private and public utilities, providing electricity without significant community representation. Political and economic influence continue their growth rhetoric to ignite the fossil fuel industry bigger and better. With emphasis of growth and productivity, this has led to an extractive economy that prioritizes energy as a commodity rather than a public good. Entrenched in capitalist motives, the United States macro-grid distribution energy threatens the well-being of communities of color.

Technological advancement and racially-coded costs burdens renters of color, causing further disenfranchisement to communities of color. The country's economic system favors technological advancement in the energy sector, instead of reforming an energy grid that is socially just for all communities. Technological advancement leaves out community representation through the decision-making process; this is an act of procedural injustice (Ottinger, 2011). Additionally, a person of color is much more likely to be a renter than a white individual. Renters of color are confined to a renting market that leaves them in older, less energy-efficient structures. Lower-income renters dedicate 21% of their income to utility costs; whereas a higher-income renter pays about 15% of their income on electricity bills (Carliner, 2013). An increase of technological advancement and a deficit in renters of colors' rights are two of the many reasons that demonstrate a need for a socially-just energy distribution system.

Energy Democracy is a political and environmental ideology that promotes transferring decision-making power away from corporate interest and into public hands. This movement has swept across the country in the past five years, as more people are acknowledging the undemocratic processes of our current energy system. The model I suggest incorporates two main components: **property and people**. Locke's ideas helped me form my opinions on labor and workmanship theory. Property entitlement is gained when labor is exerted by the individual. To make it relevant to my thesis statement, I challenge the idea that if a community generates and distributes their own energy (labor), then they should claim their energy as theirs (property). Ostrom researches common pool resource practices and an essential element to her work is adopting a governing institution that is flexible to the needs of the community. A cultural commons approach is necessary to spark local knowledge for local energy.

The second component to the model centers on people. Driving local self-reliance will lead to community development and empowerment (Boggs, 2012). Marx (1906) critiques division of labor (capitalism) as a suppression of individual freedom. He describes a collective identity of workers as a right to their labor. In similar thought, Grace Lee Boggs promotes the idea of reciprocity between individual development and community participation. She notes the importance of seeking understanding of the individual-self through community participation. Restructuring our electricity grid to be by and for the people is an act of mobilizing communities, especially communities of color and renters of color.

An energy democracy model centered on property and people is a revolutionary approach to our energy grid, counteracting the procedural injustices of furthering knowledge gaps and keeping communities of color and their voices misrepresented. Energy democracy, focusing on

property and people supports a just transition to less dependency on fossil fuel, meanwhile strengthening a democratic process to include communities of color voices. Uplifting communities of color, ultimately leads to the well-being of all people. In our modern society, we are always interacting with energy, and we must reason that we need an electricity system that aligns with the values of equity and justice. Energy democracy is an imminent ideology putting people over profits.

In Tangting, Nepal, the community-based hydropower plant focuses on the surrounding communities' inputs rather than corporate agendas. During my study abroad experience, visiting the small hydropower building next to the rush of water would spark an interest to challenge the existing structures of the electricity grid in the United States. The "in-my-backyard" hydropower plant allowed the community to be a part of the decision-making process, empowering community action and resiliency. Whether in Nepal or in the United States, we can look to existing institutions and ask if they democratically serve us as a community. In order for the community to sustain modernity, we must understand how our energy and the industry governs us.

What we are made up and in every aspect of our planet, energy is everywhere. We are dependent of our energy, as we plug in our phones, car, or personal computer, refrigerate our medicine, and accommodate handicap accessibilities. Revolutionizing the energy system to include local knowledge will be the basis of reforming other undemocratic systems. We no longer want to be left in the dark. We are in the process to an equitable and brighter future.

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