FINDING THE TIME: VALUING THE SOCIAL REPRODUCTION OF LABOR IN ATLANTA'S ELECTRICITY POLITICS

by

NIKKI LUKE

(Under the Direction of NIK HEYNEN)

ABSTRACT

In this dissertation, I investigate how electricity contributes to the uneven reproduction of racialized and gendered labor relations under racial capitalism and why clean energy policy becomes central to organizing to challenge these uneven connections. I build on feminist scholarship, energy studies, and urban political ecology to illustrate how electrification transforms the temporalities of social reproduction and production. I investigate new moments of everyday life that become appropriable labor through four sites: the utility, the union, the training program, and the state. These sites offer geographically distinct perspectives into the uneven appropriation of waged and unwaged labor and illuminate diverse moments of democratic politics through which people contest the devaluation of their time. Organizers in the U.S. South working at the intersection of energy, economic, and racial justice envision an alternative politics of energy democracy built around a demand to use time and resources in a way that supports, sustains, and nourishes communities. I use policy and narrative analysis to interpret the personal experiences and place-based histories that inform electricity politics. Based on archival data collection, interviews, and participant observation around

policy-making and in the regulatory proceedings before the state Public Service Commission, I consider how advocates draw on the tradition of the long civil rights movement to contest the reproduction of uneven power relations rooted in difference through electricity infrastructures in Atlanta.

INDEX WORDS: Social reproduction, labor, time, energy, electricity, urban political ecology, Atlanta, value, US South, racial capitalism, energy democracy

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by

NIKKI LUKE

BS, University of Pittsburgh, 2014

B Phil, University of Pittsburgh, 2014

M Sc, University of Manchester, 2015

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NIKKI LUKE

Major Professor:	Nik Heynen
Committee:	Joshua Barkan
	Matthew T. Huber
	Jennifer L. Rice

Electronic Version Approved:

Ron Walcott
Interim Dean of the Graduate School
The University of Georgia
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DEDICATION

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CHAPTER 1

INTRODUCTION

In 2019, the Georgia Public Service Commission granted a $1.7 billion rate increase to the regulated electric utility Georgia Power that provides electrical service to 70% of Georgia residents including those in Atlanta. The Public Service Commission works with Georgia Power to determine the fuel sources the utility uses to generate electricity and the price customers pay for it as part of its mandate to secure "safe, reliable, and reasonably priced" utilities for Georgia residents.[1] The decision came after months of letter-writing, public testimony, and protest from racial justice, faith, and environmental organizations who argued that the Company's proposed $7.95 increase in monthly service fees would disproportionately affect the people who are least able to afford their light bills. In a rally to *Fight the Hike* outside the Public Service Commission at the end of the first day of hearings, a group of predominately Black Georgia Power customers gathered to explain their concerns. One woman from the Malcolm X Grassroots Movement put it simply: "We ask for $15 an hour and we're told it's not feasible. Now we know this increase is coming and there's been no increase on our side."[2] She observed that electricity is intertwined in the reproduction of racialized and gendered power relations as the Company, permitted by the regulator, extracts value from Atlanta residents. In this dissertation I investigate Atlanta's electricity system to understand the social reproduction of labor rooted in difference and the uneven appropriation of time across the co-constitutive spaces of social reproduction and production.

I work backwards from the regulatory proceedings in 2019 that allowed Georgia Power to maintain the electrical network with a significant profit to shareholders to understand how the particular model of private electric provision regulated by a state agency emerged to govern electricity in Atlanta. Electricity is a commodity that powers everyday life, crisscrossing the spaces of home, work, and the commute in between. It illumines the highway signs that warn of congestion on I-285, a single streetlight hanging above a bus stop, and the florescent lights in the Metro Atlanta Rapid Transit Authority train cars that disturb dozing passengers, trying to catch a few more minutes of sleep before work. The different kinds of labor that Atlantans do are intimately bound together through the grid as a hotel housekeeper pushes a vacuum, a nervous interviewee pushes an elevator button to the 8th floor, a receptionist pushes speed dial to ask her mom to pick up her sick granddaughter from school. Electricity is both a vital and banal resource connecting classrooms computers, hospital x-ray machines, office elevators, church speaker systems, ATMs, corner store cold cases, and countless other elements of the city. Its ubiquity in instantaneous communication, computing, finance, and commercial transactions that have remade the spaces, pace, and forms of work means it only becomes visible in the moments when the lights, refrigerators, air conditioning, or heaters go out – which averages less than two hours a year in Georgia Power's service territory.[3] Electricity is thus a site to observe the changing ways "in which people produce value in all domains of their lives."[4] In this dissertation, I answer two questions:

1. How does electricity contribute to the uneven reproduction of racialized and gendered labor relations?

2. Why and how does clean energy policy become a site of organizing to challenge the reproduction of uneven conditions of labor?

To answer these questions, I investigate the contradictory relationships between the state and utility that secure electrical service. The intersections of electricity in everyday life have transformed and continue to shape the organization of work in contributing to the material conditions for the production of value within and outside wage labor. Karl Marx argued that within capitalism, value is determined by socially necessary labor time, which is a metabolic relation connected to both environmental and social processes.[5] Marxist feminists have long observed that capitalism is a social and political economic system co-constituted through production *and* social reproduction.[6] The hierarchical conditions of the labor market emerge through the devaluation of work that people of color, Indigenous people, migrants, women, children, elders, and disabled people preform, which is either not recognized as labor that should receive a wage or is devalued in the workplace. Stuart Hall theorizes the essential reliance on difference for the operation of value.[7] Where Cedric Robinson observes the central role of racialization within capitalism means that it has always been racial capitalism, Angela Davis notes that racial capitalism also relies on and is experienced through gender.[8] To understand the gendered and racialized nature of labor under racial capitalism requires examining the production of value across the sites of home, school, and work. My analysis of the social reproduction of labor centers on these intersections through the utility, union, training program, such as those to prepare workers for a "green job," and the state. I examine the ways in which value-generating labor changes over time with technological, organizational, political, and financial transformation wrought in part through electrification.

I bring together the insights of Melinda Cooper, Cindi Katz, and Neferti X. M. Tadiar who disrupt the binary of social reproduction/production and unwaged/waged work,[9] and Moishe Postone who investigates the temporal dimension of value in his immanent critique of Marxist political economy.[10] Postone argues that value is a socially constructed category historically specific to capitalism that requires the exploitation and control of people's time. Read alongside feminist theorists who observe the breakdown of domains that separate home, work, and leisure to render individuals "permanently mobilized" within "new kinds of technologies of power," I examine the domination of people through time in numerous aspects of life's work.[11] Ruth Wilson Gilmore theorizes that time is "*the* resource of life" and racism is a societal process of devaluation marked by "group-differentiated vulnerability to premature death," through the violent taking or denial of life times.[12] The appropriation of time in diverse ways shapes the variegated experiences of racial capitalism as a social system that generates inequality in the production of value defined through class relations and lived through the uneven and intersecting formations of race, gender, ethnicity, nation, religion, and geography.[13]

I contend that electrification, as a resource that commodifies time itself, becomes integral to the reproduction of class divisions with the transformation of work that is, in part, made possible with the emergence of new technologies that contribute to the energy-intensification of everyday life. I examine how the interconnected and interdependent processes of electrification and electrical governance change through clean energy implementation. Organizing around clean energy, which I use to refer to renewable energy and energy efficiency, brings together diverse stakeholders in Atlanta challenge the uneven reproduction of labor regimes that make time value productive.

Urban Political Ecologies of Electricity

Energy is central to this dissertation and is defined as the capacity to do work that puts value in motion to facilitate the continuous expansion and reproduction of capital. Over time, fossil fuels have powered increasingly mechanized, automated, and computerized production to ever more efficiently extract surplus value from workers.[14] Scholars working within critical energy studies emphasize the structuring role of energy in the capitalist mode of production. Energy systems organize labor regimes and shape the forms of everyday life such that Matthew Huber argues energy is a socio-ecological relation that makes possible "the 'production and reproduction of life.'"[15] I investigate the reproduction of labor to understand how value is produced within and outside the workplace through a case study of Atlanta's electric system built by the utility, Georgia Power, under the auspices of the state Public Service Commission. I consider how electricity transforms the reproduction of labor across four sites: the utility, the union, the training program, and the state. Each of these "cuts" offer a different perspective on the ways in which electrification engendered the material conditions that reproduce uneven class relations rooted also in difference.

Electricity is a unique form of energy that can be generated from a range of fuel sources such as coal, solar, hydro, or nuclear. Scholarship in urban political ecology and environmental history illustrates the domination of nature through these resource flows that domesticate resources to build and power cities.[16] Electricity is thus a socio-ecological relation that directs resource flows of coal, water, natural gas, uranium, lithium, and silicon,[17] which extend the spatial reach of colonial processes of resource

extraction and uneven power relations.[18] These relations are embedded in complex sociotechnical systems built through the cooperation of diverse actors (i.e. state regulators, engineers, construction workers, land owners, bankers, and customers).[19] I draw on urban political ecology to interrogate how electricity remakes labor and life in Atlanta. In so doing, I offer a unique contribution to understand the ways in which electricity transforms waged and unwaged labor.

Through a case study of Atlanta, Georgia, I analyze the historical-geographical formation of the urban electricity network to understand how the electric utility emerged and shaped worksites and working people's lives. In the early 20th century, electric companies in the U.S. began to promote the idea that electricity was a "natural monopoly" and encouraged regulation by state public service or utility commissions.[20] Georgia Power, which today powers Atlanta, is just one example of a regulated, investor-owned utility that emerged through the articulation of federal, state, and local law, and financial and corporate lobbying. Across the U.S., more than 70% of customers receive electricity from investor-owned utilities.[21] The role of state regulatory commissions varies widely between states and may include regulating the capital structure of investor-owned utilities, overseeing transmission and distribution infrastructures for electricity, limiting utility shut-offs, delimiting pollution standards, and determining allowable fuel sources including the definition of "renewable" fuel sources to meet low-carbon electricity targets.[22] In Georgia, the state Public Service Commission and Georgia Power negotiate the capital structure and fuel sources that the utility uses through the Integrated Resource Plan and rate case.

An urban political ecology of electricity illustrates how these networks of urban electrical provision and regulation become terrains of political contest. I focus on electricity, although my argument is pertinent to energy more broadly, because electricity is an energy source of growing importance. Reducing greenhouse gas emissions to respond to climate change requires decreasing fossil fuel use to decarbonize energy sources. Decarbonization is commonly understood to require two primary steps: "Clean up electricity" and "Electrify everything."[23] The process of transitioning energy to cleaner fuel sources is a geographic process. Cleaning up electricity entails a switch to wind, solar, and hydro power to operate electric vehicles, buildings, and industry. Electrifying everything also means that the locations of energy production will change from concentrated power plants to wind and solar farms that sprawl across rural landscapes and rooftop solar, energy storage, and electrical vehicle charging distributed through the built environment.[24] These changes may also disrupt the electrical workforce.

Solar companies, environmental justice organizers, and consumer advocates have seized upon the reconfiguration of electricity production through clean energy implementation to challenge the model of vertically-integrated, investor-owned electric utilities like Georgia Power.[25] The electrification of everything to phase out fossil fuels does not necessarily change the reproduction of exploitative relations based on the accelerating and boundless tendency of capital to over-accumulation, historically resolved through capital-intensive "fixes" that substitute machines for living labor,[26] rather James McCarthy theorizes the very process of renewable energy implementation as presenting a "socio-ecological fix."[27] While capital may benefit from decarbonization, this move also threatens to reorganize systems of labor organization embedded within the

existing utility model. Remaking the electricity sector could disrupt existing job sites, job classifications, and labor conditions collective bargained between unions and the utility to ensure a living wage and family-sustaining benefits for utility employees.[28] Labor geographers have described how these processes of over-accumulation and capital-switching devalue workers in eliminating demand for their skills and the ways in which workers and unions, have organized to resist changes in wages, benefits, and hours.[29] Organizing the clean energy sector poses new challenges for beleaguered labor unions in the South. I examine the ways in which electrification and struggles over clean energy disrupt the social reproduction of labor. Within urban political ecology, labor is posed as central to the production and transformation of nature, however, the experience of workers remains understudied.[30]

I trace the historical-geographical emergence of electricity in Georgia to contextualize the on-going work of policymakers, consultants, labor leaders, solar developers, and workforce development and job training providers who will determine the future of labor in the electricity sector. Clean energy policy strives to address related questions of social reproduction within and beyond the worksite as electrical infrastructure intersects in everyday life generating unevenness in household energy burdens, which defines the ratio of household energy costs to household income, and vulnerability to climate change. Clean energy policy is also seen as an opportunity to form new political solidarities across racial, gender, class, and geographic relations in Atlanta. I investigate the coalitions through which organizers and advocates work together on policy to address the reproduction of inequality through electric infrastructure and within clean energy implementation across the utility, union, training program, and

the state. Reducing the carbon intensity of electrical generation is necessary to address the climate crisis, but will not *necessarily* address the conjoined crises of poverty and income inequality that the speaker from the Malcom X Grassroots Movement identified.[31]

Southern Organizing for Energy Democracy

Organizing in the U.S. South at the intersection of energy, economic, and racial justice has envisioned an alternative politics of reproduction built around a demand to use time and resources in a way that supports, sustains, and nourishes communities. Denise Fairchild and Al Weinrub observe that the election of President Trump, whose campaign supported the fossil fuel industry and espoused "anti-Muslim, anti-black, anti-Latino, and anti-immigrant fear mongering," or "racism in the service of human extinction," and the struggle at Standing Rock for Indigenous sovereignty and self-determination were two moments that galvanized a more cohesive movement for what they term energy democracy.[32]

Energy democracy is "a way to frame the international struggle of working people, low-income communities, and communities of color to take control of energy resources … and use those resources to empower their communities… [as] an essential step toward building a more just, equitable, sustainable, and resilient economy."[33] Fairchild articulates that energy makes possible racial capitalism and organizing energy democracy must renovate the existing model of liberal democracy in the U.S. founded on settler colonialism, chattel slavery, and imperialism that protects the rule of value based on the exploitation of nature and difference.[34] In her biography of Ella Baker, Barbara

Ransby describes Baker's vision of radical democracy as socially and historically specific to the "parameters of exclusion" defined through race, gender, and class and rooted in personal relationships that disrupt the "cold impersonalism of the market-driven dominant culture" and reject the social mediation of value to enact a "more human social order."[35] Energy democracy similarly builds from locally grounded struggle and at points has sought inspiration from Ella Baker's life's work.[36]

In the South, organizing for energy democracy builds on the organizing tradition of the Black Freedom Movement, extending through what Singh terms the "long civil rights era," bracketing the New Deal and Great Society. During this period, the extent of the capitalist state expanded through Keynesian reform just as Black social movements that "were urban, national, and transnational in scope and conception" exposed the fallacy of U.S. civic ideals projected abroad through the Cold War and protested racial apartheid to demand social democratic citizenship at home.[37] This periodization of the long civil rights era connects "democratic political mobilization" to integrate employment and access social reproductive programs authorized under the New Deal to organizing against legally-sanctioned apartheid practice under Jim Crow in the U.S. South and organizing in this tradition continues to inform political struggles, including more recent movements for environmental justice and clean energy.[38]

Integrative organizing for clean energy and racial and economic justice is perhaps most famously represented by Van Jones who started the "Green Jobs, Not Jails" campaign at the Ella Baker Center for Human Rights in Oakland, California to place people leaving the criminal-legal system into work on urban green infrastructure and clean energy projects. Inspired by the work of Ella Baker during the long civil rights

movement, Jones endeavored to create a counter-hegemonic program for the Left that would address the crises of social reproduction in the post-Fordist city for the working and non-working poor. Green jobs became synonymous with manufacturing or construction work that resembles traditional blue-collar industrial or building trades work, however, Jones worked with organized labor in the Bay Area to create positions that would have wages and benefits at union-scale to offer a pathway to middle-class careers.[39] This analysis of the political terrain that connects carceral systems to environmental injustice to welfare cuts to fossil fuels "puts on the political agenda the questions of moral and intellectual leadership, the educative and formative role of the state."[40]

The promise of green jobs has inspired a generation of youth organizing from the first Powershift conference in 2007 to recent demonstrations on Capitol Hill by the Sunrise Movement calling on congressional leaders "to stop climate change and create millions of good jobs in the process."[41] Importantly, youth organizers of color have slowly pushed the predominately white environmental movement to consider an intersectional platform for climate justice that centers Black, Indigenous, migrant, and queer perspectives. My interest in green jobs in part traces my biography – as a sixteen-year-old with a fresh driver's license, but not yet old enough to vote, I started knocking doors for then-candidate Barack Obama in the summer of 2008. With budding environmental politics, I was convinced that Obama could address climate change. Better yet, he promised to create five-million green jobs for those out of work as a result of the financial crisis in the process.[42] Where I lived in southwest Virginia, it seemed at first that green jobs could foster a "chain of equivalence" that create links between the climate

and other economic and social justice concerns.[43] I was a senior in high school when Van Jones, who had been appointed as Green Jobs Czar, resigned from the Obama Administration, given the backlash for his "Leninist" viewpoints and affiliation with a campaign to free Mumia Abu-Jamal.[44] I remember wondering what that might mean for any policy to mitigate climate change. Despite Jones's removal, the notion of green jobs remained a rallying point articulated to diverse labor, environmental, and environmental justice struggles. The call for green employment arguably grew stronger as demands for a "Green New Deal" gained global attention as a necessary investment to respond to the financial crisis preceding the Copenhagen Conference of Parties.[45] Doreen Massey observed that organizing for a Green New Deal has "had an impact on common sense" by connecting a "multiplicity of crises - financial, oil and climate change crises … and tr[ying] to point to all the different social groups that are worst affected."[46]

The Green New Deal Resolution proposed in 2019 by Representative Alexandria Ocasio-Cortez and Senator Ed Markey builds on this history of intersectional environmental and labor organizing to connect demands for "millions of good, high-wage jobs" to social reproductive concerns of a healthy environment, housing, and healthcare. Importantly, the call for "guaranteeing a job with a family-sustaining wage, adequate family and medical leave, paid vacations, and retirement security to all people of the United States" returns to the moment in which green jobs were first proposed by economists alongside support for the Humphrey-Hawkins Full Employment Act.[47] A job guarantee would reverse the workfare framework that manages people's time in which state requirements to be in work or training to receive public assistance trap low-wage workers in poverty.[48]

In the absence of federal action on climate change, state and local initiatives to act on climate or a "Green New Deal" have emerged,[49] but Southern elected officials have been slower to move. In part, foundations, environmental organizations, labor unions, non-profits, and think tanks that support this organizing elsewhere in the U.S. have ignored the South given regressive labor laws and a lack of environmental regulation that mean the terrain of political organizing is very different.[50] The Gulf South for a Green New Deal policy platform names this disregard in centering the South as an important site of action given the historical and on-going, multi-racial, coalitional organizing across African diasporic, Indigenous, and migrant communities for economic and environmental justice. The policy platform commends the national resolution and offers their own recommendations, citing W.E.B. Du Bois who

> characterized the relevancy of the US South as a key link in the chain for the American working class fighting against exploitation and violent suppression. 'As goes the South, so goes the nation' was a statement of fact of our national reality then and is a statement of fact for our reality now. Generations of communities that have survived government sponsored genocide, enslavement, and decades of environmental racism have important perspectives for the social transformation vision of the Green New Deal.[51]

In their perspective, a Green New Deal must abolish the hegemony of racial capitalism, dismantle the fossil fuel and chemical infrastructures that perpetuate environmental racism, and rebuild new democratically determined collectivities.[52] Electricity is central to these imaginaries as a resource complicit in the violence of racial capitalism that must

be repurposed to secure the necessary infrastructures to maintain and nourish homes and communities in a low-carbon economy.[53]

In Atlanta, organizing has centered on decarbonizing electricity. In 2017, Atlanta became the first major city in the U.S. South to adopt a 100% clean energy target to supply all electricity from renewable sources by 2035. More than 100 cities have adopted similar measures in response to the U.S. withdraw from the Paris Climate Accords, committing to keep track with the international agreement signed under President Obama's Administration to reduce carbon emissions.[54] Atlanta's then-Mayor Kasim Reed grounded the Resilient Atlanta plan to meet these targets as inspired from a historical commitment to progress and a contemporary imperative to address racialized socio-economic inequality. He noted: "From being reduced to ashes during the Civil War to becoming the economic hub of the Southeastern United States, from segregation and Jim Crow to the cradle of the Civil Rights Movement…our progress has been hard-fought but always strongest when built together."[55] His statement reflects that clean energy implementation is an issue of racial and economic justice in Atlanta where low-income, predominately Black, residents face the fourth highest energy burden in the U.S.[56] In the tradition of multi-racial, coalition politics that defined Atlanta's city governance through the long civil rights movement, leading Mayor Hartsfield to deem Atlanta "the City too Busy to Hate,"[57] business, environmental, and faith groups negotiated the twin priorities of equity and economic development for the energy policy.

The push for clean energy to address racially uneven energy costs in Atlanta also illustrates the contradictions of the New South creed imprinted in local planning efforts. Georgia is the number one state for business, historically "ranked in terms of low labor

costs, low tax rates, [and] low energy costs," which also means low wages, poor services, and high energy bills for small residential users in Atlanta which is the most unequal city in the U.S.[58] The city's clean energy policy envisions pathways to shift local energy infrastructure and address energy burden, while also noting the myriad co-benefits that could be generated in the process, including an estimated of 8,000 new livable wage jobs.[59] In this dissertation, I chronicle organizing across the utility, union, training programs, and state to implement this resolution in a way that centers the concerns of Black, migrant, and poor people to secure the benefits of decarbonizing electricity in access to jobs, clean energy amenities, and lower electric bills.

My research builds on interviews, archival analysis, and more than two years of participant observation in meetings, hearings, and conferences from January 2018 to May 2020 where the conflicting politics of using clean energy policy to address the uneven social reproduction of labor in Atlanta played out. I worked closely with Neil Sardana of the Sierra Club in an effort to reinvigorate a lapsed alliance of labor and environmental justice organizations that had formed following the 2008 recession to push for green jobs in commercial energy efficiency and solar. Our monthly meetings stalled during the 2019 regulatory proceedings before the Public Service Commission in which I turned my attention to the questions that preoccupied Neil and my other contacts in Atlanta at the Partnership for Southern Equity's Just Energy Circle. In the hearings before the state Public Service Commission, advocates pushed Georgia Power to increase the share of solar energy in its portfolio and to implement energy efficiency programs and rates to benefit low-income homeowners and renters. I understood this work as also being about the social reproduction of labor as I listened to testimony and phone banked in an effort

to get people to come out to hearings. People expressed concern about the quality of their everyday lives, the need to work more, eat less, or seek charity to pay their electric bills. Through the lens of the social reproduction of labor, I attempt to capture how electricity contributes to a political economy based on the reproduction of racialized and gendered difference that unevenly values the life-time of people and appropriates what Tadiar refers to as "life-making social capacities."[60] People do what is necessary to manage the pressures of low wages, high bills, and apathetic elected officials. I chronicle moments from my fieldwork sparingly here – most of the stories come from forty interviews conducted with a range of advocates and practitioners. However, spending time in the city profoundly shaped the way I understand its politics. I was fortunate to work with labor, housing, energy, environmental, and reproductive justice organizers who often collaborate on creative campaigns that at their core challenge the value form as a structuring, social mediation that reproduces racialized poverty.

In a training at the International Brotherhood of Electrical Workers, Local 613 union hall, Georgia State University Professor Harvey Newman offered his perspective on the development of Atlanta at the invitation of Deborah Scott from Georgia STAND-UP, a think and act tank that brings together labor and community leaders. Newman explained that while some embrace Atlanta's identity as "the city too busy to hate," he had always found the words of civil rights leader Juanita Abernathy to be apt. She professed, "if Atlanta is the city too busy to hate, I'd hate to be there when they find the time."[61] I use Juanita Abernathy's term here to analyze the domination by time that underwrites uneven racial development in Atlanta and to understand the various ways in

which electricity, provided by Georgia Power, appropriates time from everyday life for Atlanta residents.

Hall and Massey, echoing Baker's theory of democracy, emphasize that politics cannot be analyzed abstractly, but must always be considered in their concrete, historical and geographical conjuncture. From the specific articulations that emerge between social forces, hegemony becomes observable, and can also be resisted.[62] Hegemony, "far from natural, even when depicted as such," is always "processual, contingent, and contested."[63] If power is maintained in part through consent to social, political, and economic relations, then power resides within the everyday interactions where value is produced. Attention to the concrete experiences and commonsense notions through which Atlanta residents understand everyday life is necessary to envision alternatives. Following the infrastructures of electricity to see these connections between different people, sites, and forms of labor organization, may help, as Katherine McKittrick identifies, "illustrate the ways in which human geographies are, as a result of connections, made alterable."[64]

Chapter Overview

In this dissertation, I investigate the ways in which electricity contributes to the social reproduction of labor to appropriate value from everyday life through an analysis of four key sites transformed through electrification: the utility, the union, the training program, and the state. These sites do not break down evenly, but rather present overlapping and intersecting narratives that illustrate the ways in which the conditions of labor are determined beyond the worksite to appropriate time differently and reproduce a classed, racialized, and gendered division of labor that is also always contested. Utilities

are “political powerhouses” and have been crucially important boosters for the growth of the Sun Belt with the assistance of local and state governments. Electrification contributed to the transformation of the U.S. economy with the boom of the South and West that diminished the power of organized labor.[65] Contradictorily, within utilities, workers are often organized and in Atlanta the building trades unions have a cooperative relationship with Georgia Power. Where organizing shapes the conditions of work, admission to the union is contingent on training and it is also through training programs that civil rights demands were historically made and funding for green jobs was promulgated. The state intersects across these four sites to shape the reproduction of labor. I focus in on the Public Service Commission, a state agency shaped by the utility and a proxy to investigate state formation in relation to capital in Georgia.

In the following chapter, I bring together literature from energy studies, urban political ecology, and feminist political economy to theorize the ways in which electricity changes forms of labor to extract value from everyday life. I discuss the consolidation of the electric utility and consider how organizers across the U.S. envision counter-hegemonic and oppositional politics beginning with demands for energy democracy.

In Chapter 3, I detail my mixed-method qualitative approach to research through participant observation in policy advocacy and design with energy justice and environmental organizations in Atlanta. I build from Gilmore’s and Massey’s calls for a public geographic method that thinks through policy as method to begin to shift hegemonic projects.[66] This requires a critical and reflexive approach to the role of white, middle-class, and educated experts, myself included, who form an infrastructure that supports and legitimates slow change to the electrical system. I detail my approach to

narrative analysis based on feminist epistemologies that I engage throughout this dissertation to evaluate testimonies from meetings, hearings, and rallies in addition to semi-structured interviews and archival data analysis.

In Chapter Four, I build from urban political ecology to trace the historical-geographical development of the **utility** and the extension of electrification that remakes the urban form in Atlanta by wiring households, businesses, offices, schools, and transportation among other sites into the electrical network. I review the role of the utility, Georgia Power, in defining the regulatory structure that governs it, which was initiated in response to the 1906 Atlanta Race Riot and eventually guaranteed the Company monopoly service over electric production in the city. The utility became an important promoter as a coordinating member of Atlanta's political regime and sought to woo businesses and customers into its service territory. In the vein of urban self-promotion, the city government has also embraced urban sustainability planning and sought to increase its share of electricity from renewable sources to address climate change and uneven energy burden. I consider the tensions that have emerged in the changing electrical regime as Georgia Power works to maintain their control over urban electrical provision.

In Chapter Five, I turn to the **union** as a key site in the social reproduction of labor in which workers organized to standardize employment and reduce contingent work conditions that devalued people's time. The union engages in what Mann terms a "politics of measure" to conserve the wages, benefits, and training model developed over time.[67] I trace the racial and class division that emerged through the International Brotherhood of Electrical Workers (IBEW) union between "skilled" trade work within

Georgia Power and "unskilled" positions within and adjacent to it, which Black workers challenged through labor organizing, affirmative action campaigns, and litigation. The IBEW remains a contradictory site wedded to the growth paradigm of Georgia Power and has supported its controversial decision to expand nuclear energy production at Plant Vogtle. I contrast Georgia Power's nuclear energy investment to the growth of solar energy installation companies where jobs are growing exponentially, but the growth of temp positions challenges the union model of the social reproduction of labor.

In Chapter Six, I analyze the **training program** as a social reproductive infrastructure that responds to technological change powered through electrification and intends to provide dislocated workers, workers of color, young people, and others with barriers to employment with the connections, resources, and skills to access high-wage careers. I chronicle the uneven outcomes of training initiatives through an etymology of "green jobs" that traces green employment policies from when they were first proposed in the 1970s to the present. The increasing emphasis on training alongside workfare reforms means that state support is focused on reproducing workers and appropriates uncompensated time from trainees. I consider the training programs that hired people for green jobs in Atlanta following the 2008 financial crash and contrast union and community-based initiatives that sought to direct public resources to public employment with on-the-job training.

In Chapter Seven, I consider the role of the **state** in reproducing the value form by authorizing the commodification of electricity that is vital to everyday life, yet unaffordable to many in Atlanta who face high energy burden shaped through the infrastructures of the built environment and labor market that Georgia Power helped to

create. I argue that customers create value for the utility, which is able to secure finance by putting up as collateral the future demand from customers. While the utility appropriates future time, this is not a value recognized by the Commission that focuses on the narrow definition of value as cost. I consider the proceedings before the Public Service Commission since 2013 to analyze the tension that emerges between advocates who prioritize different elements of clean energy policy. The "Green Tea Coalition" brought together conservative and environmental organizations who successfully secured the first mandate for solar at the Commission in 2013. I consider the challenges of sustaining coalition organizing around the electric grid in the case of the 2019 rate case in which the Commission authorized a special rate for residential solar customers, yet raised the bills for all users despite a related campaign to *Fight the Hike*.

I conclude in Chapter Eight with summative reflections on the challenges of building cross-class and inter-racial solidarity around clean energy policy despite the interconnections of electricity users through the grid. I return to discussions of energy democracy to consider proposals that build from the Green New Deal. I argue that anti-capitalist energy politics capable of challenging the social reproduction of labor under racial capitalism must consider the appropriation of labor beyond the workplace and work toward abolition of the structures that made access to the resources necessary to live a healthy and dignified life contingent on labor.

CHAPTER 2

THEORETICAL AND HISTORICAL FRAMEWORK

This chapter lays out the theorical and historical framework through which I investigate the transformation of the social reproduction of labor through electrification in Atlanta. Building upon Marxist feminist critiques of the operation of difference within the value form, I contend that electricity renovates forms of waged and unwaged labor to differently appropriate value from both waged work and forms of social reproduction necessary to reproduce the commodity labor form. Situating electricity within Atlanta's political economy, I ask why energy becomes a site for counter-hegemonic organizing. These ideas began to emerge for me on a sticky August evening in 2018 at a Community Conversation on Clean Energy in the Emmanuel Lutheran Church in Cascade Heights. This predominately African-American, working-class neighborhood in southwest Atlanta that has one of the highest rates of energy burden in the city as electricity bills eat up nearly 6% of median household income.[1] It was the last roundtable that the Mayor's Office of Resilience had scheduled to gather input from residents and workshop recommendations to reach the city's 100% clean energy target. I got there a little early and helped Marquese, a Sierra Club organizer, set up a buffet with trays of Jamaican goat curry. About forty neighborhood residents and clean energy advocates slowly trickled in and found their way to the food, piling rice and curry onto paper plates. The meeting began with a welcome from the church pastor and an ice breaker asking each person to introduce themselves and their favorite superhero. A city official and two consultants

then talked through possible pathways to reach 100% clean energy electricity before opening the floor for questions.

Despite the optimistic presentation, residents responded sharply, raising fears about gentrification and gaining access to the clean energy amenities described. A community organizer with the Partnership for Southern Equity asked for more specifics on planning to "help provide some relief for the six highest burdened zip codes in Atlanta? I see the word equity, but I didn't see any solutions or any movements that move towards residents … or that were people-oriented."[2] Her questions contributed a healthy skepticism as to whether or how the city could secure its agenda to address energy burden without a clear plan envisioning what equity would look like.[3] A neighborhood resident followed up, asking why city resources were being used for energy planning at all because "you can say, we're doing this on Cascade, but you done gentrified Cascade – Cascade, ain't the same…community no more." For him, energy was a second order priority divorced from economic displacement and gentrification that Black residents of the neighborhood face. A consultant jumped in, pointing out that energy was one place where the city could do something to address gentrification given the link between energy burden and evictions. He noted that the number one reason people seek a payday loan in Atlanta is to pay a utility bill, but the resident seemed unconvinced. A woman who had just been hired to run an educational program with the West Atlanta Watershed Alliance, an environmental justice organization that works near the church where we were, attempted to cool the tensions in the room, asking, "assuming the plan is adopted, since we were talking about equity, as we have more clean energy companies in Atlanta is there going to be some kind of mandate for companies to go in and do green job

training or actually hire a certain percentage of people from the community and actually install solar panels or geothermal?" She also asked about the 99-year franchise agreement between the city and the utility and whether that would affect the city's ability to achieve any of the goals outlined in its plan. One of the consultants jumped in, explaining that the franchise agreement would not be up for negotiation until 2065, but there is still a lot the city can do in the meantime. He moved on to the next question without addressing the possibility of job creation. In the more than eighty meetings, workshops, and conferences I attended and observed, participants raised the same questions about electric bills and jobs that could be generated from moving to 100% clean energy. These questions asked sometimes incredulously, sometimes lovingly, but always insistently, pushed for specifics on how the glossy plans devised by a predominately white staff could actually change the economy of the city that reproduces racialized poverty.

Here, I build from this town hall to theorize the relationship between electricity and the reproduction of labor in four parts. I first discuss energy studies literature through an integrative framework of racial capitalism that builds on Marxist feminist scholarship to analyze how the law of value operates to reproduce "fatal couplings of power and difference."[4] I consider how difference emerges in the relationships between energy, automation, and the reproduction of the labor force. I second follow the intimate connections between the utility and the state to draw out an urban political ecology of electricity that reveals the proximities of electrical governance in sites of waged and unwaged work.[5] I third investigate the development of the social welfare state that emerges to reproduce workers with automation and the continual transformation work. Electricity accelerates the pace of production and changes in the needs and forms of

social reproduction, and, I contend, contributes to the differentiation of workers in the electricity-intensive workfare regime that emerges in the South. I conclude with a discussion of counter-hegemonic organizing for energy democracy in Atlanta's political regime to abolish the economic development model based on the reproduction of low-wage labor.

The role of the state is central to the theorization of the value form presented here. The state not only secures the measure of the value form, which is expressed as money, but also protects and determines the legal enclosures that secure property and define what is valuable.[6] To understand the role of electricity in the constellation that contributes to the reproduction of labor, I follow Antonio Gramsci and Hall to theorize the state broadly as it encompasses both governmental and civil society (i.e. utility, business, religious, and non-profit) actors, or "the entire complex of practical and theoretical activities with which the ruling class not only justifies and maintains its dominance, but manages to win the active consent of those over whom it rules."[7] Consent is achieved through the educative role of the state that disciplines workers as both subjects and objects of racial capitalism's value form.[8] I consider the relational processes of valuation and devaluation through electricity as one perspective on the political economic forms that make possible the appropriation of waged and unwaged labor in everyday life.

Reproducing Labor, Appropriating Life

In the 1880s when Thomas Edison first attempted to commodify electricity, he foretold a Utopian transformation of humanity through electrification that tamed nature for human purposes.[9] Beckoning modernity, "electricity was not merely one more

commodity;" but rather "seemed linked to the structure of social reality; it seemed both to underlie physical and psychic health and to guarantee economic progress."[10] Where electricity was first sold as a novelty for urban elite, energy historian and theorist Vaclav Smil attributes advancements in "modern industrial and post-industrial societies" to its proliferation. He expounds that efficiently-used fossil fuel energies increased life expectancy, spurred urbanization, and improved mobility and access to information, none of which "would have happened without the conversion of an increasingly higher share of fossil fuels into electricity, the most flexible and convenient form of energy."[11] Electrification proceeded unevenly, as I observe in following Atlanta's electrical networks to study the articulation of labor and energy politics that transform the city.

Critical energy studies examine the evolution and intensification of energy use over time. During the Industrial Revolution, the concept of energy, as "the fundamental ability to do work" produced through the expenditure of different fuels that represent "potentialities," was defined alongside developments in thermodynamics to improve production efficiency.[12] Fossil fuels replaced human and animal muscle power as energy sources in increasingly mechanized and automatic production. This growth in energy consumption enabled ever more efficient extraction of surplus value from workers.[13] From this perspective, capitalism can be understood as an energy system in which ever-expanding energy use makes possible the reproduction of the means of production and continuous growth.[14]

In *Fossil Capital*, Andreas Malm argues that fossil fuels were a necessary input for urbanization and the expansion of capitalist mode of production. Where the first textile mills in Lancashire, England relied on waterpower, coal was a mobile energy

source that could be collected in stockpiles and thus allowed production to concentrate in cities. Fossil fuels facilitated primitive accumulation as "abstract space and abstract time germinated in the early mines: domestic fuel from the stock made possible the unparalleled enlargement of British towns – the sites where 'easily-produced' laborers would congregate – while mining introduced an element of dark and dead, unresponsive, aeonian and therefore uniform time into the economy."[15] Fossil fuels enable the standardization of time central to the capitalist mode of production.[16] Abstract time is not a "natural" category. Rather, time as a measurement in which "motion, events, and action occur.... [and become] divisible into equal, constant, and nonqualitative units" is a socially and historically specific precondition to the emergence of wage labor.[17]

Marx theorizes capitalism as a social system that relates all people based on what they have in common with each other, namely the capacity to work that comes to be measured quantitatively as socially-necessary labor time.[18] This does not mean that commodities that workers toil over for extended periods are more valuable, but rather he defines that the labor "that forms the substance of value is homogenous human labor," which "has the character of the average labour power of society, and takes effect as such; that is, so far as it requires for producing a commodity, no more time than is needed on an average, no more than is socially necessary… under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time."[19] Postone offers a distinctive interpretation of this temporal dimension of labor under capitalism in identifying that value takes "a social form that expresses, and is based on, the expenditure of direct labor time."[20] His interpretation of the Marxist value form emphasizes the dual role of labor under capitalism that produces commodities, including labor power, and in

so doing creates abstract social structures that dominate social relations as people interact as workers. Reproducing workers becomes the means to the continued valorization of capital.[21] His intervention to posit time as a disciplinary force that structures the necessity of reproducing labor, aligns with Katz's analysis of social reproduction. She observes that the necessary labor to complete household reproduction is always vexed in reproducing exploitative relations under capitalism.[22] Reading Postone alongside Marxist feminist scholarship, I argue that life's work comes to reflect "the temporal dimension of the abstract domination that characterizes the structures of alienated social relations in capitalism."[23] In other words, the value relation extends beyond the worksite such that social relations that are shaped by the domination of time are also productive of value. Labor thus creates a disciplinary effect necessary to the reproduction of social relations defining at its core that capitalism is uniquely characterized as a "system of social production in which wealth is created through the appropriation of direct labor time and workers labor as cogs of a productive apparatus."[24]

Where Postone focuses on the specific question of wage labor to ask why and how a system that compels workers to labor for their subsistence came to be, feminist, Black, Indigenous, and post-colonial scholars take up the questions of time and elucidate the ways in which other forms of life and labor outside the wage relation also produce value for capital.[25] Hall asserts that the law of value operates through and because of racial, ethnic, and gender differentiation (among other forms of embodied difference).[26] In Geography, there is growing dialogue with Robinson's thesis on "racial capitalism," which insists that racialization originated in Europe, preceding the organization of capitalism, and coheres within capitalism as an economic form.[27] This perspective

illuminates the ways in which capitalism requires and reinforces "culturally and socially constructed differences such as race, gender, region, and nationality, and is lived through those uneven formations."[28] Black women scholars, including some writing from a Marxist feminist perspective, have long asserted that race, class, and gender cannot be decoupled for people who embody the intersections of these identities.[29] Their work, and that of postcolonial feminists, illuminates that racial capitalism has always also been gendered and relies upon on-going processes of devaluation and "primitive accumulation" of nature and non-waged work performed by women and enslaved and colonized peoples.[30]

Jodi A. Byrd investigates the interconnections between systems of racialization and colonization, which "have worked simultaneously to other and abject entire peoples so they can be enslaved, excluded, removed, and killed in the name of progress and capitalism."[31] Categories of racial and national difference justify the appropriation of land and usurp people's time in distinct ways as systems of racial and colonial dominance intertwine in the U.S. to devalue land and people. Fernando Coronil and Andrew Needham observe that the temporal horizon of progress has always been and remains dependent upon continued extraction from "nature-exporting" regions that endure the ecological effects of fuel and resource extraction to power urban transportation and electrical production.[32]

Centering difference within the framework of value extraction draws into focus the time spent in life's work that has not always been recognized as value-productive, and yet is essential to the reproduction of labor and hence the value form as a system of social mediation. Where Marx posits that "in reality, the individual consumption of the worker

is unproductive even from his own point of view, for it simply reproduces the needy individual; it is productive to the capitalist and to the state, since it is the production of a force which produces wealth for other people."[33] Feminist theorists elaborate that social reproductive labor, which Katharyne Mitchell, Sallie Marston, and Cindi Katz define as "life's work,"[34] encompasses the necessary labor to reproduce workers and is value productive as a direct expenditure of human labor time. The diverse forms of waged and unwaged reproductive labor encompass the biological reproduction of new generations of workers, education to train and discipline workers within the energy-intensive, capitalist mode of production, and housework, childcare, cooking, and other forms of care necessary to reproduce a household, community, and the social structures that constitute the value form.[35]

Leopoldina Fortunati examines the temporal dimensions of housework and sex work as relations that exploit socially necessary labor time. Writing about the wage relation of the 20th century that characterized the Fordist family wage in the U.S., she emphasizes that the consumption of the male worker is made possible by a wife, mother, sister, housekeeper, and/or prostitute who perform productive labor for capital that returns the worker each day to the worksite. Women's work requires the direct expenditure of human labor time, which is managed more cheaply in the home than market where relations of love, care, and obligation to family also compel labor. In this context, "when capital buys male worker's labour-power with the wage, the latter is not only giving credit on the use-value of *his* labor-power, he is also giving credit on the use-value of *hers*. Capital settles two credits when it pays the wage."[36] Housework is thus entangled in the wage labor form, although the labor of women expended in reproducing

workers is not always remunerated. This is an important distinction because women perform necessary labor that is both the direct expenditure of human labor time and enrolled in the wage relation through partners, parents, or employers. However, the time that women spend in housework and labor power that they expend is devalued relative to that of male, wage workers. Feminist theorists push back against the notion of "homogeneous human labour"[37] to observe the time that women spend in socially-necessary unwaged labor. Investigations of relations across gender, race, and class also observe the differential valuation of the expenditure of people's time, whether, for instance, women are working in the home of their own family or selling their labor in the market.

The devaluation of "women's work" within the home is mirrored in the low wages paid for house cleaning, childcare, education, healthcare, and sex work, the latter of which is also criminalized as sex workers risk state repression.[38] In the U.S., where Black and migrant women have historically worked outside the home in much greater numbers than white women, often in paid domestic service for middle-class, white families, social reproductive labor cannot be studied apart from race and nationality.[39] Race, gender, and class – often interpreted through neutral categories of "skill" – intersect to depress the wages of women of color and devalue their time,[40] even as working women often have a "double shift" at work and in their own homes.[41] David Harvey asserts that Marx's method offers "something to build upon rather than to negate."[42] However, to do so, as Lisa Lowe illustrates, requires attention to these encounters of "differently-laboring people" and the relations across difference structured in dominance and solidarity.[43] Lowe's historical account astutely points to the

transformation of labor relations and the social reproduction of labor over time as differently-laboring peoples are drawn into relations of wage labor.

I analyze electricity as one way to observe these changing relations over time as technological and organizational efficiencies reduce the amount of socially necessary labor time required to produce any given commodity.[44] Postone emphasizes that time requirements for workers remain constant despite capital substitution. Increases in productivity through automation means that less and less labor time measured in hours, days, or weeks is required to produce each unit of material wealth. However, the valorizing demands of capital tied to human labor mean that even as technological improvements increase productivity, the demands for people to report to work do not decline. This dynamic generates a contradictory increase in resource intensity and deepens the division of labor.[45] A worker is not only "compelled to produce and exchange commodities in order to survive, but—if one is to obtain the 'full value' of one's labor time—that time must equal the temporal norm expressed by social necessary labor time."[46] In other words, people are disciplined both to work and to accumulate and invest in skills to secure higher returns for their labor power.[47] However, skill, technology, and organizational structures that define socially necessary labor are also socially and historically determined. Evelyn Nakano Glenn emphasizes that "the division between 'skilled' and 'unskilled' jobs is exactly where the racial division typically falls" as these categories are themselves social relations negotiated between employers, unions, workers, and the state under the historically specific conditions of production shaped through energy systems.[48]

The segmentation of the global labor force witnessed since the 1970s as capital roves the globe seeking cheap labor and energy[49] reveals that the value form reproduces not only class, but that this differentiation is also based on race, gender, nationality, and geography, which are reproduced in production.[50] Persistent discrimination that differentially values labor time along lines of gender, race, and nationality, as well as class, is critical to understanding the continued dominance of the value form that designates some people's time as more valuable than others. Collective action has also changed the forms of work overtime. Unions demanded that the working day be standardized and negotiated for wages and benefits. Throughout the long civil rights movement, workers of color militated for access to unions and employment and women and workers of color demanded protection from discrimination.[51] The temporal dimension of wage labor continue to compel workers to the jobsite, even as workers do not necessarily receive sufficient remuneration for their labor to survive.

To understand the diverse expenditures of time transformed through energy intensification and subsumed within the value form, the transformation of labor relations cannot only be defined through the conditions of the workplace, but also reverberate through the family and state. Cooper analyzes the shifting constellation of state, family, and capital that shape the contemporary labor regime of "post-Fordism" and blur "the limits between production and social reproduction, production and consumption, and production and circulation to turn even the most intimate bodily functions into exchangeable commodities and services."[52] New markets for tissues, blood, and surrogate pregnancy differentially value the time of workers that extends beyond the jobsite into other part of life.[53] For Cooper, post-Fordism is thus defined by the breakdown of the

traditional labor contract and with it, the law of value that Marx defined based on socially-necessary labor time that is broadly generalized as a temporal metric of average and homogeneous human labor. Instead, she argues,

> it would seem that the nonstandard time of the unpredictable event has come to define the abstract conditions of labor in the contemporary moment…. we might say, contingent labor has become socially necessary labor. What we might define, then, as the post-Fordist law of value no longer works through the statistical normalization of time (the law of large numbers) but rather by affirming the lawfulness of contingency itself. [54]

This labor form appropriates time in new ways as a worker must be "on call," always "flexible" to come into work when needed perhaps to staff production promised "just in time" such that "human activity is chiefly exercised in earning a living."[55] The formation of labor regimes that eliminate the boundaries between "work time" and "home time" rely upon coercion of increasingly precarious workers living in conditions of poverty or compelled through workfare that mandates employment or participation in training to receive public benefits.[56] Understanding the historically-contingent category of labor requires, as Cooper proposes, a different theorization of the "law of value," that makes room for differences in the social form across geographies, social conditions, and forms of labor.

Reading feminist, third world, and Marxist critiques of exploitation and expropriation together, Tadiar conversely examines temporality to expand the category of labor. She identifies "social experience as a form of creative or living labor that is subject to exploitation."[57] This theorization of "living labor" is rooted in an analysis of the on-

going primitive accumulation of both space and time as human activity and natural resources are subsumed through intertwined processes of colonialism and capitalism. She argues:

> If we denaturalize these newly capitalized human and nonhuman resources and understand them not as freely appropriable nature but as the products of organized sentient bodily capacities and energies (forms of cooperation that traverse human agency), then it is possible to consider social experience as an important force and means of life-production of those very human and natural resources. The point is not so much to expand the concept of labor to subsume all human experience under this category, but rather to utilize the notion of labor as appropriable life-making social capacities and as a theoretico-political standpoint to examine the role of immaterial and bodily practices of experience of marginalized social groups in contemporary relations of accumulation and production.[58]

She extends feminist analyses that consider the value produced in household labor to more broadly analyze a range of "appropriable life-making social capacities," including forms of cooperation, care, and social knowledges that individuals share, which can also be subsumed within the value form.[59] As a theoretical and political framework to examine the appropriation of time from everyday life, Tadiar offers new ways to analyze the temporalities of fast, on-demand, or just-in-time capitalism empowered through fossil fuels and electric infrastructures that facilitate global production. She illustrates how forms of wage labor are connected to workers made "surplus," and how workers in the Global North are connected to moments of production and social reproduction in the Global South, bringing together a contemporary analysis of "the circuits, connections,

associations, and mixings of differentially laboring peoples"[60] through the temporalities that discipline individuals within local and global labor regimes.

The transformation of labor in the U.S. cannot be understood apart from the on-going extraction of social reproductive and migrant labor from the Global South, which, Tadiar identifies, provides a reserve labor army with "the life-times of surplus people at the disposal of a state."[61] At a global scale, Tadiar argues that uneven development is exacerbated as states and local elites wager the futures of their citizens whose "time is value productive…. [T]he life-times of surplus people at the disposal of a state and its crony economic elites can thus function as monetized assets used to leverage the latter's position in playing the global financial markets."[62] In this sense, the time of social reproduction is usurped as people and communities manage austerity imposed by international agencies and local elites and continue to do what is necessary to survive when social welfare programs are eliminated.[63] This expanded conceptualization of labor to account for appropriated time of everyday life that sustains private accumulation, national economies, and international flows of finance as people make do despite the roll back of state benefits illustrates the mediation of the state, capital, and collective action of workers that structure the social relations inherent in the value form.

So far, I have built on Postone's assertation that "value is a social form that expresses, and is based on, the expenditure of labor time," to illustrate to various ways in which value is produced in life's work even as the remuneration to separate forms of labor is differentiated.[64] I have endeavored to show that the process of valuation is always relational – while time is caught up in the process of valorizing capital in waged or unwaged work, the wages received for labor-time are historically and socially determined

through relations of race, gender, and nationality making "devaluation inseparable from capitalist processes of assigning value."[65]

The devaluation of waged and unwaged labor extends to other moments that appropriate life-making social capacities. Laura Pulido has theorized devaluation in conversation with Gilmore's definition of racism as "group-differentiated vulnerability to premature death."[66] She chronicles the slow violence of environmental injustice and argues that environmental pollution disregards human and ecological health and allows companies to accrue value while contributing to premature deaths that appropriate time. In a paper with Ellen Kohl and Nicole-Marie Cotton, she extends this argument to theorize devaluation as a taking of time in which "devalued communities, places, and people serve as pollution 'sinks,' that enable firms to accumulate more surplus than would otherwise be possible."[67] Devaluation in this framing intersects with and amplifies the differential valuation attributed to the direct expenditure of waged and unwaged labor time of women, migrants, and people of color. Environmental pollution is particularly important to consider in relation to electricity where coal, nuclear, gas, silicon, lithium, and other forms of resource mining, refining, and use damage the environmental health of workers and frontline and fenceline communities along the supply line.[68] While individuals do not consent to pollution, it becomes a form of social labor that extracts time from those living in "sacrifice zones." Pulido therefore defines environmental racism as "state-sanctioned racial violence" when understood as "the devaluation of people of color, plus capital acting with legal impunity."[69]

Scholarship on devaluation and disposability further illustrates a tension that emerges in the theorization of abstract labor as homogeneous socially necessary labor

time,[70] in which the category of abstract labor occludes other necessary labor embedded within the value form that is subsumed within relations of money. This revised understanding of labor as time expenditure that is generative of value reveals the ways in which new moments are appropriated to strengthen the capitalist system built on controlling people's time through relations of coercion and consent. This does not mean that all of life is value generative, but rather requires attention to the geographically and historically specific ways that people are brought into relation as workers, such as through electrification and electrically mediated forms of communication and information that capitalize on people's use of computers for information, communication, and social media. Domestic workers, sex workers, incarcerated people, migrants, and union autoworkers among countless others all perform value-generating labor in various ways. Some of this labor is paid, some is not, and some is underpaid based on cultural definitions shaped through racist, sexist, ableist, and heteronormative understandings of skill.[71] The process of degrading, denigrating, or under-paying people for time based on socially and historically constructed notions of their time's worth must be understood alongside the appropriation of time as central to the value form that relies on and reproduces difference. As Pulido's work indicates, it is necessary to illustrate the ways in which valuation is not only temporal, but spatially produced through uneven socio-ecological relations.

Nature, Value, and Urban Political Ecology of Electricity

Recent nature-society scholarship has also interrogated the non-valuation of nature within the political economy of racial capitalism.[72] For Marx, nature is seen as a

use value and the source of material wealth that is valorized through the labor process.[73] Postone asserts that labor also has a historically specific trajectory in the generalization of automation and production efficiencies that substitute energy-intensive machines for human labor. In so doing, the production of material wealth is delinked from the direct expenditure of human labor time, yet the valorization requirements of capital remain the same. Even as people can produce more in less time, the length of the working day does not change. Postone hypothesizes that this dynamic of hastening productivity fuels the "accelerating, boundless, runaway form" of capitalist accumulation with "deleterious consequences for nature as well as for humans."[74] Labor under racial capitalism must be understood as a socio-ecological relation that simultaneously exploits human and non-human natures. Robertson and Wainwright point to the necessity of examining nature through Marxist value theory, which "provides a uniquely powerful basis for seeing the interconnections between ecological change and class relations."[75]

However, Michael Ekers and Alex Loftus observe that despite the theoretical grounding of nature-society scholarship within Marxist political economy, engagement with labor is limited.[76] They problematize the notion of a transhistorical category of labor rooted in a "theoretical security that workers in general do the work of making natures," and argue that this oversight "has resulted in scholars taking labour for granted, rather than examining specificities and differentiations."[77] These differentiations in the forms of waged and unwaged labor that capital appropriates are central to my theorization of value and understanding the spatialization of these socio-ecological processes helps to elucidate the circuits through which valuation and devaluation occur.

Urban political ecology has endeavored to make visible the ecological, social, political, and economic relations that intersect to shape the uneven processes of urbanization.[78] This field runs parallel to political ecology, which originated in the 1970s from discussions of cybernetics and systems theory, anthropological and geographical research into cultural ecology, and natural disaster/hazards research emerging from the nuclear era.[79] However, specifically urban political ecology traces its distinct roots to Marxist discussions of urban production and metabolism.[80] Understanding, as Harvey asserts that "there is nothing unnatural about New York City,"[81] Erik Swyngedouw coined the term "urban political ecology" to characterize urban geographic research that considers the networked construction of socionatures. He argues that urban "social relations operate in and through metabolizing the 'natural' environment through which both society and nature are transformed, changed, or altered and new socio-natural forms are produced."[82] In other words, the dialectical relations that shape urban geographies cannot be reduced to distinct "natural" or social forces, and power relationships embedded in difference shape unequal access to urban spaces. Innovative studies trace the production of urban nature through the entangled interaction of human labor and non-human processes focusing particularly on networked, city infrastructures including systems to provision water, food, green space, and electricity.[83]

A "second wave" of urban political ecology scholarship has more recently considered processes of urbanization that think beyond "methodological cityism" and critiqued anthropocentrism in taking up more-than-human perspectives and new materialisms.[84] In conversation with critical environmental justice scholarship and critical ethnic studies, urban political ecology has also investigated the co-construction of nature,

gender, coloniality, and race. This more embodied analysis interrogates the socio-ecological construction of urbanization and works to denaturalize intersecting power relations rooted in racial, gender, national, ethnic, and class difference that are spatially constructed and also extended through environmental politics.[85]

Embodied analyses have considered a range of different sites and scales including social reproduction as constituted within the uneven production of urban landscapes,[86] and the metabolic production of people's bodies to account for genetic and physiological changes as a result of disease, injury, and exposure to environmental toxins.[87] Julie Guthman highlights key contradictions in the embodied production of nature as people digest, degrade, or become diseased in ways that absorb "the externalities and excesses of production."[88] Just as capitalism "produces particular types of landscape as a central element in its own survival," so too are people differentiated and in some cases harmed.[89] Disease and injury in this sense are processes of devaluation that take people's time in new ways as Pulido considers in the context of environmental pollution.[90] Relatedly, Melissa García-Lamarca and Maria Kaika observe that real estate speculation and financialization are also embodied as home-owners sacrifice "even health and well-being to mortgage debt repayments."[91] Jaqueline Patterson critiques the commodification of energy in U.S. cities, detailing the "reliance that so many have on electricity to sustain life" and the premature deaths that result from utility shut-offs,[92] drawing out the fatal potential of energy burden, particularly in Black and poor communities.[93] These embodied understandings of fiscal and financial crisis reveal that "the body is an accumulation strategy" and a site through which capital captures value in the taking of time.[94]

In dissecting the production of urban environments, urban political ecology has also analyzed shifting structures of regulation and governance and political organizing for justice.[95] Much of this work centers on the critique and analysis of policy as a tool that de-politicizes environmental issues and constrains political action. Policy, to borrow from Katz's analysis of social reproduction, is a "vexed" and shifting terrain of debate.[96] Broadly defined as "agenda setting combined with action," policy can be implemented at various scales and is administered through programs to realize intended outcomes.[97] Geographers have interrogated the transformation of environmental policy with the explosion of environmentalism since the 1970s and global efforts to address climate change and reduce greenhouse gas emissions. Within cities, energy policy also usually begins from environmental or climate concern.[98] Environmental policy and management have increasingly operated through an expanded notion of governance in which actors and institutions within and beyond the state engage in policy making and administration. This ostensibly distributes power and responsibility to community-based and civil society organization by changing the role of the government from policy-maker to facilitator intended to "steer and guide" new networks of actors.[99] While intended to expand community participation, "new governance spaces are still inscribed with a state agenda" that can coopt community energies.[100]

Cities have long operated through governance that relies on non-governmental actors and coalition building to achieve policy objectives, as Clarence Stone observes within Atlanta, where politics operate through what he terms a political regime shaped by the relationship between city hall and business elite.[101] Peter Brand argues that urban environmental policy has grown in importance in part because "the environment emerged

as an arena in which social welfare could, to some degree or another, be discursively constructed and materially produced at a minimum public cost compared to say job creation, housing or health service provision."[102] From this perspective, urban environmental policy necessarily falls short in meeting community needs and has often been articulated to neoliberal discourses that shift government responsibility to citizens through public awareness campaigns urging recycling, local and organic eating, and low-carbon transportation.[103] Jennifer L. Rice describes the contradictory territorialization of carbon emissions within city limits as a greenhouse gas reduction strategy that imposes responsibility for atmospheric processes on urban citizens.[104] In collaborative work with Joshua Long, Rice characterizes the growth of urban policies to address greenhouse gas emissions as "climate urbanism," which includes "new policies, programmes, and development initiatives aimed at (1) the active promotion of cities as viable and appropriate sites of climate mitigation and adaptation, and (2) the prioritisation of significant efforts to protect the physical and digital infrastructures of urban economies from the hazards associated with climate change."[105] Cities promote their urban sustainability initiatives to potential investors, employers, and residents. Urban residents enrolled in decarbonizing projects of living closer to work, walking and biking to work, and taking public transit contribute to gentrification and exacerbate racial and class inequality in cities.[106] This perspective reveals urban climate policies intend to ensure continued economic reproduction without attention to the social results of questionably effective strategies.

Such urban energy, environmental, and climate policies do not address the racial capitalist systems in which politics operate and Swyngedouw argues, serve to de-

politicize climate and environmental policy "characterized by the increasing evacuation of the proper political dimension from the public terrain as technocratic management and consensual policy-making has sutured the spaces of democratic politics."[107] Policy comes to dictate the procedures and practices to manage the governance of public and environmental affairs without democratic debate, collaboration, or consensus-building about what community priorities are or how they should be addressed.[108] At the beginning of this chapter, I detailed one instance in which this played out in Atlanta when city officials sought input from community stakeholders after Atlanta's 100% clean energy policy had been implemented and after the primary pathways for program development had been determined. Policy from this perspective is the domain of post-political consensus building for technocratic management of the environment, which ignores the underlying structures of exploitation and accumulation that produce and exacerbate uneven vulnerabilities to environmental problems along lines of difference. Critical environmental justice scholarship has similarly critiqued the reliance on policy, regulation, and litigation in an effort to shift the procedures that authorize dumping and pollution. Working through the state means EJ activism has largely failed to address racially uneven environmental contamination produced under racial capitalism and authorized by the "racial state" that concedes to violence against poor people and people of color.[109]

In his study of New Orleans following Hurricane Katrina, Clyde Woods arguably traces an urban political ecology of vulnerability to climate change in showing the ways in which marshland dredging to facilitate oil drilling and shipping exacerbated the effects of flooding following Hurricane Katrina in predominately Black neighborhoods.[110] So-

called natural disasters are among the most visible socio-ecological processes that exacerbate uneven political, economic, and social relations,[111] and Woods works backward from the storm to draw out a socio-ecological analysis of its uneven effects for New Orleans residents. He defines that policies structured through political lobbying by employers and public assistance intersect to trap Black city residents in poverty as a "human-made disaster" of "impoverishment," which "is a highly organized institution" that creates "community, racial, class, and gender destitution."[112] His analysis excavates the intersections of state, capital, and community relations that shape the labor market to theorize the spatial and temporal dimensions that devalue labor. He highlights the necessity of analyzing the specifically socio-ecological form of production to understand the ways in which workers are trapped into reproducing systems that perpetuate impoverishment and also creatively resist these patterns through cultural and political action.

Feminist science studies and feminist geographers also illuminate efforts to re-politicize policy through academic and activist engagement. For Beth A. Bee, Rice, and Amy Trauger, feminist scholarship "increasingly challenges the disembodied and masculinist science behind climate change discourse and policy-making at broad scales and illuminates the implications of climate change in local places."[113] Mobilizing a feminist understanding of "everyday" politics to emphasize uneven and embodied experiences of climate policy can also presents opportunities for resistance and rupture that "demonstrate the importance of a pluralistic politics of knowledge for effective climate governance."[114]

Reading these critiques of policy alongside scholarship on electrification from environmental history, geography, and science and technology studies is important to understand how valuation is spatially reproduced through multi-scalar political processes engaged in power production.[115] Casey Cater and Needham interrogate the resource intensification of the U.S. South and West through electrification powered by coal extracted from Appalachia, Wyoming, and the Navajo Nation. Flows of fossil fuels powered racially uneven development across regions and in Sunbelt cities.[116] Conor Harrison offers a similarly historical perspective on electrification in rural North Carolina that considers the uneven patchwork of local, state, and federal policy and public and private finance that continue to shape racialized disparities in access to regular and affordable electricity service.[117] Harrison and Jeff Popke identify that energy affordability is relationally produced and related not only to the cost of energy, but also the socio-economic position of a household, and the quality and energy efficiency of a home.[118] The geographies of urban electricity therefore require a socio-ecological understanding of the built environment defined through urban processes of segregation, urban renewal, and gentrification that define access to housing and energy affordability.[119] The uneven geographies of disconnection also point to the intimate relationship between people, utilities, and electricity governance that shapes cities and the interior spaces of home and highlight the practices of survival through which people provision electricity service necessary to heat and cool their homes following utility shut-offs in myriad ways.[120] In the following section, I analyze the spatiotemporal unfolding of electrification that changes the forms and tempos of the social reproduction of labor in the city.

Electrification, Automation, and Social Reproduction

In *Black Reconstruction in America, 1860-1880*, Du Bois posits that an alliance between industrial capital and Southern landowners overthrew Radical Reconstruction after the Civil War to re-establish an accumulation regime dependent on the racialized valuation of labor. The alliance between industry and the South would have devasting global impact "because of the predominant political power of the South, built on disfranchised labor. The United States was turned into a reactionary force. It became the cornerstone of that new imperialism which is subjecting the labor of yellow, brown and black peoples to the dictation of capitalism organized on a world basis."[121] In the same period that Du Bois saw the dismantling of radical democratic possibility, Timothy Mitchell emphasizes the emergent forms of collectivist labor organizing that advanced popular democracy in the West, explaining that "with the large-scale use of fossil fuels, and especially following the advent of electricity in the 1880s, a large majority of people in industrialized countries became consumers of energy generated by others." Electrification drove demand for fossil fuels, namely coal. The advent of electrified homes and businesses along with demands for steam-powered locomotives meant that when workers organized to shut down mines, docks, and supply lines that carried this vital resource to factories, railroads, and power plants, their organizing disturbed wide swathes of the population. Mitchell identifies the labor and social welfare protections that unions won through their ability to control the supply lines that carried coal as a democratic victory of collective action. However, in the U.S., the benefits won through labor union representation largely enacted a private social welfare state in which the means of household reproduction remained dependent on wage labor.[122] The failure to

enact a social wage, meant that many, particularly in the U.S. South, remained without the social welfare benefits that are elsewhere seen as "synonymous with modernity."[123] The bifurcation of the social welfare state must be understood within Du Bois's analysis of the U.S. South.

Electrification powered the post-bellum modernization of the "New South," which promised shared economic property and social uplift under a strict white supremacist racial hierarchy.[124] New forms of unfree and coerced labor expanded through sharecropping and convict leasing to build road infrastructure and mine coal that powered railroads and the proceeds of which financed electricity and electric streetcars.[125] Financial and industrial interests that fueled railroad construction became foundational to new efforts to increase agricultural production, mine natural resources, and promote the growth of urban centers in the South.[126] Electricity would become an increasingly important commodity that resulted from this particular constellation of financial, state, and technological forces that converged in the 1880s.

Electric lighting was initially a luxury good that slowly replaced gas lighting in theaters, banks, restaurants, shops, hotels, and along streets in affluent corridors and commercial districts.[127] Technological improvements in alternating current in the 1890s meant electric power could be transmitted across greater distances to provision more of the urban environment, however, commodifying electricity, which cannot be stored, unlike other energy sources, required attention to its materiality as "a temporal product."[128] For electricity to be profitable, producers matched a diversity of customers with different energy demands throughout the day and year to maximize use of a power generating station. Power supply priced by volumetric rates measured in kilowatt hours

of illumination or machine operation.[129] The commodification of time to sell electricity made all hours of the day saleable based on the cost of generation and demand for electricity at a given moment, promising instantaneous, continuous, and uninterrupted power provision.[130] Artificial illuminants made around-the-clock production possible and electrification made it necessary to maximize efficient use of a power-generating station.[131] Yet, as Marx observed, "the prolongation of the working day beyond the limits of the natural day, into the night... only slightly quenches the vampire thirst for the living blood of labour."[132] Where capital substituted fresh workers at different shifts, Fortunati observes that in social reproductive labor, women put "no such limit on the[ir] work time" out of love or obligation.[133]

The commodification of electricity was not a foregone conclusion and the organization of the emergent electric power industry remained a contested issue across much of the U.S. as local, state, and federal officials debated whether electricity service should be provided as a private service or a public good. Cater argues that from the beginning point of electrification, Southern energy providers intervened in local and national politics to design a regulatory structure amendable to emerging investor-owned utilities and "actively courted governmental involvement in their business."[134] Much of this lobbying occurred through the electricity trade group, the National Electric Light Association, that formed in 1885 and began to promote the idea that most efficient form of power provision is monopoly control under a private company in a given service territory to prevent duplication of powerlines, electrical poles, and generating plants. The Association launched a public outreach campaign for "legal monopoly" for private companies to be regulated by state public service or utility commissions in a model

similar to the railroads.[135] Over time, every state in the U.S. adopted this model. Long-term exclusive franchises established a monopoly for corporate electrical companies, often called investor-owned utilities, over a defined service territory, that protected the "concentrated control of industry" in the emerging electricity sector.[136] Regulation of investor-owned utilities requires companies to ask regulators to increase the rates charged per kilowatt hour. In turn, regulators guarantee that a utility will receive a rate of return negotiated through the regulatory process. The territorial control was not absolute. Many models exist for distributing electrical service including municipal power provision and electric cooperatives initiated during the Great Depression to make American farmers into "modern customers" through electrified living, although none challenge the commodification of power production.[137]

The electric utility capitalizes on the everyday demands that customers put on the electric grid. My focus here is on investor-owned utilities, which profit from selling electricity to their customers at inflated prices, under the auspices of state regulators who offer a fixed rate of return for investment based on the capitalization of the utility. This financial model created an incentive for utilities to market electricity and grow power demand, ensuring "self-sustaining growth" in the continued intensification of electricity use into the future as this vital resource became ever more necessary to everyday life. Public regulation over private power production is "explicitly oriented to the promotion and stabilisation of capital" intended "not to reduce, but rather to rationalise, the rule of value."[138]

This model has changed over the last forty years through the deregulation of electricity and gas markets across the U.S. that sought to create a free market for power

producers. Gretchen Bakke argues that regulators "still have a whole lot of say over what a utility can and cannot do," but "this 'a lot' is a whole lot less than it used to be."[139] In the U.S. South, Texas is the only state that has deregulated.[140] As, I examine in the subsequent chapters, the dominance of investor-owned utilities, which work in cooperation with regulators, remains relatively unchanged as they instead cooperate to find new ways to extract value through novel rate structures that differentially price electrical demands over time.

Electrification provides a material basis for the extension of abstract time into all aspects of everyday life, making it possible to work all the time in ways that blur the boundaries between home and work life and creating new sites in which value is produced. Electricity quickly rewired workplaces, transportation systems, and information and communication systems, becoming intimately bound up within household reproduction and challenging the reproduction of labor as production and jobs shifted South.

Before the advent of electrification, mechanization had already begun to transform labor. Returning to Malm's *Fossil Capital*, we can observe two changes in the condition of work through fossil fuels as production is urbanized. Where Malm assumes that in cities "[a] reserve army of labour takes up residence," he also defines energy intensification as a contradictory process that constantly replenishes this potential pool of workers as machines powered by fossil fuels restructure and accelerate the pace of work.[141] Automation substitutes energy-intensive machinery for skilled labor and improvements in machinery, powered by fossil fuels instead of human or animal muscle power, "deskills" workers, reducing factory workers to "hands,"[142] that Marx observes

are little more than "conscious linkages" overseeing the "mechanical and intellectual organs" of automated production.[143] This revolving dynamic of energy intensification, mechanization, and the reorganization of the labor force creates the growth imperative under capitalist production that historically led to racial conflict in Atlanta, fueling competition for jobs between Black and white rural migrants moving to the City.[144] Mechanization generates a surplus labor population as "capitalists in effect discard variable capital."[145] This pool of unemployed "becomes, conversely, the lever of capitalist accumulation…. It forms a disposable industrial reserve army… [that] creates a mass of human material always ready for exploitation by capital in the interest of capital's own changing valorization requirements."[146] Even as automation fueled through increased energy inputs, make the production of things, services, and wealth possible with less labor, the direct application of human labor remains necessary and the domination of everyday life by time persists.

Automation thus creates a crisis of legitimacy for the value form in eliminating the root source of value from the production process that is assuaged through the creation and maintenance of difference. Migrants, people of color, and women most often populate the reserve army of unemployed job seekers that becomes "the lever" of accumulation in a twofold sense.[147] Surplus labor increases competition between "free" workers coerced to work to eat, and also drives a division between skilled labor in craft unions and white collar workers, who possess "property in jobs,"[148] and the unemployed or underclass deemed "scroungers," "welfare queens," or simply lazy.[149] Hall theorizes racial domination that articulates to the capitalist organization of the labor force and determines the conditions of labor to "ascribe the positioning of different social groups in

relation to one another … [and] legitimate the positions so ascribed."[150] The labor reserve produced through automation, patriarchy, racism, and colonialism is justified through the "commonsense" notion tied to what Martin Luther King Jr. criticized as a "bootstrap" mentality, that all people in the U.S. have equal opportunity if they could only work hard enough.[151]

For "dislocated workers," who are made surplus from worksites, automation represents also a taking of time as machines replace the weeks, months, or years spent learning skills honed to a particular job.[152] However, the changing composition of socially necessary labor time does not change capital's valorization requirements, rather, the state intercedes to manage the reproduction of labor. It constructs the edges of the labor market in maintaining a labor reserve army through public benefits, education, and employment on public works.[153] Katz illustrates that the social reproduction of labor as the source of value under capitalism is secured "through a shifting constellation of sources encompassed within the broad categories of the state, the household, capital, and civil society."[154] Importantly, it is also through the state that hegemony is contested and where, as Du Bois proclaimed in 1935, "the black and white labor vote" has worked "to confiscate[e] the property of the rich."[155]

During the 1930s, implementation of New Deal policies shaped the contours of the contemporary labor system in the U.S. by creating welfare programs and labor protections that unevenly redistributed wealth and entrenched uneven labor relations that differentiated between white people and people of color, men and women, and urban and agricultural workers.[156] In Atlanta, a group of seven "outstanding citizens," representing the city, the Georgia Federation of Labor, and the largest companies, including Georgia

Power Vice President W. E. Mitchell administered relief, putting the economic recovery under the direction of local elite who sought to kickstart industrial growth in the South.[157] Passage of New Deal reforms depended on maintaining the support of the South's Democratic congressional votes and numerous concessions were offered that restricted agricultural and domestic workers right to fair wages and union representation and devolved distribution of welfare benefits to the states.[158] Gilmore observes that this compromise assured "the extension to the federal scale — through differentiations of protections from calamity and opportunities for advancement — of the South's apartheid practices."[159] Racism within the law and administration of new social welfare benefits for workers and welfare recipients perpetuated devaluation of workers of color. Organizing around the New Deal sparked the beginning of the long civil rights movement as Black workers fought for the full benefits of the social welfare state, even as the restrictions on labor organizing deepened with the 1947 passage of the Taft-Hartley Act and the subsequent adoption of "right-to-work" policies across the U.S. South.[160]

The New Deal also challenged the existing forms of electricity provision and included several policies to expand electrification "[w]ith their unwavering belief in the importance of electricity for modern life in terms of both productivity and quality of life," New Dealers promoted farm electrification as a jobs program through the Rural Electrification Administration and Tennessee Valley Authority.[161] These agencies extended electricity to rural areas that urban investor-owned utilities had refused to wire given the cost of extending electrical lines. Investor-owned utilities litigated to restrict the expansion of the Tennessee Valley Authority and protect the market for private power production,[162] yet, also saw their power curbed through the Public Utilities Holding

Company Act that regulated the form of electric utilities. The Act prohibited combinations of investor-owned companies that did not cover a geographically contiguous service area and also restricted who could sit on the governing board of utilities in an effort to break the alliance between power companies and Wall Street financiers. These measures aimed to limit speculation on utility stocks that contributed to the financial crash,[163] and also served to push local boosters and utilities closer together.[164] Utilities which already had a heavy hand in regional economic development politics, became avid regional promoters in an effort to attract diverse new customers who would use electricity at all hours of the day. In the South, advertising campaigns directed at industry boasted of the abundant natural resources, cheap electricity, and non-unionized labor force and others addressed to workers and travelers touted the pleasant climate improved through air conditioning and refrigeration.[165]

Housing policies further "democratized electrical use." and transformed connections between value, time, and social reproduction[166] The National Housing Act guaranteed not only home mortgages, but also construction loans to modernize homes and the purchase of electric appliances. The Federal Housing Administration instituted standards regarding outlets, wiring, and illumination that stimulated residential electrification. In "providing the basis for democratic home ownership, in large detached suburban dwellings, New Deal programs effectively created the national mass market for electrical modernization of the home."[167] These New Deal programs were racially uneven; the Federal Housing Administration restricted loans to white neighborhoods and effectively prohibited nonwhite people from accessing federally-subsidized mortgages. The returns to property accelerate the differentiation between value and material wealth

and the inflation of property values over time has deepened the racial wealth gap.[168] Housing expanded demand for household consumables and meant that electrification continued to be a jobs program as utilities manufactured new needs for electric irons, washing machines, refrigerators, and other appliances. Marketing electricity as the "silent servant in the home" that "emancipated" women to enter the workforce, the proliferation of electrified living disrupted the tempos and forms of waged and unwaged household labor.[169]

Energy intensification and electronically mediated technologies to ease communication, manufacturing, agriculture, household services, and education deepened the division of labor. The state helps to mitigate "the pace and scale of technological disruption—with its risks of unemployment and growing income inequality."[170] During the Great Depression, laws prohibiting child labor and mandating school attendance "became indispensable for keeping unemployment within reasonable bounds."[171] In the post-war era, a series of federal investigations considered the changing demands for "manpower" with the rise of automation.[172] A widely quoted finding from Lyndon B. Johnson's Blue-Ribbon Commission on "Technology, Automation, and Economic Progress reported that "the basic fact is that technology eliminates jobs, not work" as automation and computerization that substitutes for labor, also created new labor demands.[173] The Commission nonetheless recommended investments in government work programs as an employer of last resort, basic income supports, and education.[174] Where education created new labor demands, Braverman argues it is most useful in engaging the time of potential workers. The emphasis on acquiring "skills" (which may not even be necessary for work) means that a diploma becomes a "screening device" or

"ticket to admission to almost any kind of job."[175] Contemporarily, the growing cost of higher education means that not all workers are able to devote the time to get the "full value" of their labor power and electrified automation, digitalization, and computerization continue to transform socially necessary labor time.[176] Since the 1970s, technological changes have contributed to segmentation in the labor market with a gulf emerging between high-wage earners in informational, managerial, and professional work that relies on abstract thinking, which is difficult to computerize, and low-wage positions that perform nonroutine manual labor and service work deemed "unskilled,"[177] which is equally challenging to automate. Autor investigates the technological transformation of the labor force to posit that "information technology has strongly contributed to employment polarization measured in quantity of jobs, we would not generally expect these employment changes to culminate in a corresponding wage polarization except perhaps at certain times or in certain labor markets."[178] The technological transformation of the labor market cannot be studied in the abstract as automation, powered by cheap energy, also enables capital to move in pursuit of cheap labor.[179]

Throughout the 20th century, jobs relocated to the South and West and outside of the U.S.[180] The hollowing out of the middle-class in middle skill jobs is variously attributed not only to automation and deindustrialization, but a host of organizational and political factors that transformed the Fordist labor contract. Increasing flexibilization with the rise of outsourcing and temporary labor, inter-state and international competition, declining unionization, and the evisceration of welfare state protections intersected with the technological polarization of employment. The changes to welfare and labor

protections are rooted in the racial and gender politics of the U.S. South and West, where "right-to-work" laws restricted the forms of collective action available to workers that historically made manufacturing jobs into good jobs.[181] Legal and extralegal forms of repressing worker organizing and conservative politics that sought to impose work requirements through the welfare system put downward pressure on wages.[182]

In 1971, Georgia Senator Herman Talmadge proposed the first changes to welfare that included a work mandate and "emphasized immediate job placement,"[183] subsequent changes advanced by an alliance of social and religious conservatives and economic liberals restructured New Deal legislation from a "redistributive program into an immense federal apparatus for policing the private family responsibilities of the poor."[184] Cooper emphasizes the need to theorize the growing role of political and religious conservatism as part of the state apparatus articulated to economic [neo]liberalism that ushered forth workfare's "new paternalism."[185] The 1996 welfare reform, which President Clinton signed into law, dismantled Aid to Families with Dependent Children, and imposed work, job training, or job search requirements on welfare recipients. This measure also extended the domination of time in attaching lifetime limits on access to welfare renamed Temporary Assistance for Needy Families.[186] This workfare model regulates the labor market and "maximizes (and effectively mandates) participation in contingent, low-paid work" along lines that reinforce racial, gender, migration status, and generational divisions.[187] Cooper argues that this "state-subsidized supply of free or low-cost labor has inevitably worsened conditions for all service workers, especially those at the lower echelons of the labor market…. The effect of workfare has been to brutally

reinstate the historically racialized obligations of domestic servitude, in a form that responds to the imperatives of the post-Fordist service economy."[188]

The simultaneous shift in job seekers assistance shifted public support for higher education and community-based job creation initiatives to a workforce development model based around job training targeted to secure job placement.[189] This approach strives to improve workers under the assumption that that plenty of jobs are available, but the unemployed simply lack the appropriate skills to find or be hired into them.[190] However, Gordon Lafer found that the "skills" the majority of employers seek are dexterity, adaptability, and timeliness,[191] all aspects of discipline to the temporalities of wage labor. Gilmore also draws attention to the interlocking systems of criminalization and workfare through which the state reproduces racial and gender hierarchies to secure consent for the use of coercive power "over certain segments of society—whether the decree is to promote a Black woman, put her on workfare, or send her to prison for being a bad, drug-addicted, mother."[192] Incarceration also appropriates value from "surplus workers" made redundant through deindustrialization as "criminalization transforms individuals into tiny territories primed for extractive activity to unfold—extracting and extracting again time from the territories of selves. This process opens a hole in a life… a stolen and corrupted social wage flies through that time-hole to prison employees' paychecks. To vendors. To utility companies."[193] Gilmore and Michelle Alexander analyze the management of workers through mass incarceration and "colorblind" categories of criminal records that restrict the kinds of jobs people can apply for after leaving the criminal-legal system.[194] The reorganization of the social reproduction of labor through the welfare office, the school, the training program, and the prison create

new times that are productive of value in maintaining a labor reserve. As the forms of labor change under mechanization, the value form persists as a specific social relation that depends upon the consent and control of people's time as "capital can never dispense completely with necessary labor time."[195]

The structuring role of electricity in powering the contemporary accumulation regime under racial capitalism can be seen in the simultaneous demands electrification enables that constrain people as workers and consumers, crisscrossing the realms of waged labor and appropriating moments of everyday life in which electricity is enmeshed in unwaged labor as well. Marable asserts the centrality of energy in his critique of the Southern Company, the holding company that operates Georgia Power, Alabama Power, and Mississippi Power. He draws out the ways in which electrification reinforces the structures that reproduce labor such that sustenance remains bound to the temporalities of the job and welfare clock.

> In any racist and capitalist society, cheap sources of energy and high technology becomes a highly essential factor in the racial and economic hierarchy. The system of underdevelopment and racial oppression reinforces itself at every Instance: churches and cultural institutions are bought off by corporate gifts, and they reinvest their own profits into power companies; political institutions designed to protect consumers from high energy prices defend the Interests of white corporate developers; Black farmers are driven off the land, coerced to work at low wages while paying skyrocketing utility bills; the Black middle income strata's leaders in education and politics remain silent partners in the process of racial destruction.[196]

Electricity powers racial capitalism in reproducing the rule of value that governs waged and unwaged work and appropriates life-making social capacities to reinforce the racialized and gendered notions of progress based on devaluation and what Marable identifies as "racial destruction." The everyday practices and social institutions that come to rely on electric power also become subsumed within the social mediation dominated by time.

Speculative analyses of "the future of work" imagine the necessary systems to recruit and train workers with the appropriate skills as electricity powers digitalization, automation, and artificial intelligence. The production of wealth is no less dependent on the expenditure of direct human labor time,[197] and yet living-labor is usurped in new ways through social media and digital data collection. This implies new forms of collective action that are necessary to transform the social reproduction of labor under the rule of value. Central to Postone's thesis is an effort to rethink what he sees as "traditional" Marxist scholarship to suggest that workers are not the negation of the capitalist form, but rather, integral to its reproduction.[198] To overcome capitalism would require "the abolition of value" that ever defined the capitalist forms of labor as the means of social and household reproduction to begin with and instead put to work the technologies advanced under capitalism in new forms of social labor.[199]

Drawing instead on abolitionist politics in the U.S., Gilmore argues that "if unfinished liberation is the still-to-be-achieved work of abolition, then at the bottom what is to be abolished isn't the past or its present ghost, but rather the processes of hierarchy, dispossession, and exclusion that congeal in and as group-differentiated vulnerability to premature death."[200] Finding the time that underwrites the social structures that reinforce

differentiation through the value form is perhaps a beginning in the project of dismantling the temporalities of scarcity, necessity, and compulsion that enact violence in appropriating value and devaluing life. Collective action, argues Bobby Seale, is oriented toward the future and begins with seizing the time to "do something about the wretched conditions that exist, the poverty that exists, and the unjust wars that are waged in the world. The whole future must be directly related to what we, the people, want.... We must all start seeing ourselves beginning to seize the time."[201]

The Death of the Socialist Man, the Birth of the Green Worker

Electricity operates within the conjuncture of social forces that define the shifting reproduction of labor under racial capitalism to accelerate the moments of life's work that become generative of value. In the 1970s, growing concerns about environmental pollution gave rise to anti-capitalist politics that threatened the ecological devastation of capitalism's growth paradigm. In the first mention of "green collar jobs," Heffernan proposed a public works program in environmental conservation, recycling, and energy efficiency based on "a truly 'ecological' approach [that] sees the unemployed—the human worker—as a participant in the natural life support mechanism, and recognizes that employment must also mean replenishment of the environment and development of the human person."[202] His vision of work aligns with anti-capitalist calls to use the productive powers of labor for community benefit. Growing concerns about climate change fueled by greenhouse gas emissions from electrical power generation and transportation heightened demands for green Keynesianism and green public works programs as a way to manage the evisceration of the social welfare state and

simultaneously address climate change have remained an enduring political demand from the Left.[203]

Perhaps the most famous proponent of a green collar economy, and the author of the book with the same title, Van Jones declared the transformative possibility of a green jobs program to manage the environmental destruction and economic polarization of energy-intensive racial capitalism. He pronounced that to challenge the hegemony of the "military-petroleum complex that's still the dominant bloc of capital," implementing "greener less polluting forms of capital" were a step in the right direction. Achieving a counter-hegemonic politics would require a tangible political platform that relates to working-class people and their everyday concerns. He continues, "people who have real concerns about social justice, concerns about ecological crisis, and concerns about the deepening despair in our society have to propose something that's actionable. Otherwise, we leave the field of practical politics to forces with which we're opposed."[204]

In critiquing the radical Left as out-of-touch with the material realities of everyday life, Jones echoes Hall's writing on the *Crisis of the Left*.[205] At the height of Thatcherism in the United Kingdom, Hall explained the rise of neoliberalism as a hegemonic project that made historically-envisioned pathways toward socialism organized around finding class consciousness non-viable.[206] He pronounced, the "Socialist Man, with one mind, one set of interests, one project, is dead. And good riddance. Who needs 'him' now, with his investment in a particular historical period, with 'his' particular sense of masculinity, shoring 'his' identity up in a particular set of familial relations, a particular kind of sexual identity?" The challenge for the Left, which has historically sought inspiration from Marxist and trade union politics, is that even if this

antiquated and singular identity of the Socialist Man – which never represented the diversity of Black, feminist, queer, migrant, Indigenous, and other political perspectives – is dead, "can we find forms of organization, forms of identity, forms of allegiance, social conceptions, which can both connect with popular life and in the same moment, transform and renovate it?"[207] Politics capable of overcoming the hegemonic project of energy-intensive racial capitalism must take seriously the reproduction of gender, racial, class, and national difference within the value form. New realms of value production connected through the electrical grid open new possibilities for solidarity outside the workplace and across it.

Organizers working to change the electricity system have sought to build a politics of reproduction that attacks the diverse forms of living labor appropriated through the energy system in linking together questions of environmental justice, reproductive justice, Indigenous self-determination, and union representation. In their edited volume, Fairchild and Weinrub collect lessons from labor, community, and environmental justice organizers across the U.S. working to democratize energy systems. These contributions point to locally-specific and historically-rooted struggles that confront the ways in which energy makes possible racial capitalism and point to grounded efforts to realize democratic futures.

Energy – or more precisely electricity with the transition to low-carbon energy systems – is a site to form new collective politics. Individuals are connected through the grid, if in very different relationships to it, whether their political concerns are about power outages, utility shut-offs due to non-payment, clean energy, or climate change.[208] Understanding that the transition to clean energy will not necessarily be anti-capitalist or

democratic,[209] organizers and educators working for energy democracy illustrate the ways in which power circulates across and through the diverse relationships that individuals have to electricity and also strive to form coalitions that link together differently affected people.[210] For instance, the NAACP identifies that part of the challenge to addressing utility disconnection is that the needs of "customers who are vulnerable to having their utilities disconnected…often compete with the interest of utility companies, regulators, and other utility customers."[211] For the majority of customers, electricity is a negligible expense. Shut-offs predominately happen to poor people whom utilities then gouge for late fees and reconnection charges. Female-headed, African American, Latinx, elderly, and low-income households are the most affected.[212] To examine electricity as a way to understand the hegemonic project of capitalism in the South thus requires a situated and reflexive analysis attentive to the positionality of users of energy who reproduce and reconstitute the system in drawing power from the grid and paying the light bill, and are differently positioned within the "rule of value." While we face similar contradictions in using electricity, the "we" as a community of electricity users is enormously diverse, and "we" bring different needs, capacities, and histories to the struggle for energy justice. Organizing around energy acknowledges these contradictions and others that arise in working within an undemocratic and monopolistic system. Demands for energy democracy are demands for racial and economic justice that strive to dismantle the ideological and material systems that allowed for the commodification of energy to begin with and to challenge the devaluation of some people's time.

Politics capable of transforming state, capital, and civil society imply the construction of counter-hegemony through "multi-layered, long-term strategy to organize forms of counter-power and transform everyday life."[213] The transition to renewable fuels for electricity generation is an opportunity to challenge the power structures that appropriate social life-making capacities including shutting down polluting energy infrastructure, decommodifying renewable energy, provisioning affordable and efficient housing, and creating green jobs as a vision of "social labor" directed not to the reproduction of value, but the support of communities. In this sense, define Fairchild and Weinrub, "Energy democracy thus represents a new economic paradigm."[214]

In the South, energy politics contest the hegemony of growth paradigm that influenced understandings of progress in the post-bellum New South to draw creative political coalitions across climate, environmental, labor, and racial justice organizers working to democratize the sites of electricity production and governance. Demands for environmental and energy justice seek to shift the logics of the accumulation regime based on maintaining a "good business climate" and foster an abolitionist politics that dismantles the structures whereby labor under capitalism ever became the means of social interaction and survival. Geographers, historians, and anthropologists chronicle historical and on-going resistance to the New South's labor regime throughout the long civil right movement that built from Atlanta, which is a center of Black intellectual and political thought as the home of the Atlanta University Campus.[215] Political organizing for civil rights and economic and racial justice born out of Atlanta transformed the U.S. The city continues to be considered a "Black Mecca" given the educational and cultural resources and political power of the Black middle and upper class. Atlanta is also the geographical

center of political organizing in Georgia where on-going struggles for a livable city that intersect with and extend beyond electricity politics.

In the following Chapters, I illustrate the ways in which organizers in Atlanta work within local and state government in an effort to dismantle the power of the utility and re-organize electricity service to imagine a different economy that upends the reproduction of racialized and gendered difference through the value form. At the beginning of my dissertation research, I met with an organizer from the Partnership for Southern Equity, who has led community organizing around building an equitable energy system for Atlanta. I started the conversation in asking about the 100% clean energy plan that the Atlanta City Council had adopted and the possibility of green job creation.[216] She emphasized that neither green jobs, energy burden, nor 100% carbon-free electricity were the central objectives of her organizing, stating that "Energy is not the issue. It's poor housing, it's wage stagnation. And poor housing due to things like red-lining." She continued that all of these related issues must be addressed, but it is important to take on one thing at a time because "people need examples and energy is one area in which we can show them that this work is moving forward." Energy is one way to tell the story about racialized and gendered inequality reproduced through the value form and electricity is a connective infrastructure to build coalitions across difference in working to adopt clean energy and address climate change. Far from assuming that clean energy would support anti-capitalist or anti-racist politics, the campaign in Atlanta challenges the status quo of the city's political regime by taking on Georgia Power.

CHAPTER 3

METHODS AND DATA COLLECTION

In this chapter, I review my mixed-method, qualitative approach to this research to reflect on the transformation of social reproduction through electrification and assess some of the contradictions of coalition organizing for energy democracy. I discuss the role of policy advocacy and development to understand, record, and shift hegemonic projects in the current conjuncture.[1] I also consider my positionality as a white woman and academic active in policy design and advocacy and critically assess my research against the institutional support that white professionals give to sustain infrastructural systems imbricated in racial violence.[2] I observed the unfolding of electrification over time through participant observation, archival data, and interviews. This triangulated method of critical policy engagement informed through feminist epistemologies fits within the heterogeneous approaches that geographers employ to interrogate energy.

Calvert identifies that energy research is often transdisciplinary as "critical and cultural sensitivity should bleed into applied and technical/physical approaches to energy studies."[3] I share Calvert's enthusiasm for the energy wonks and practitioners who cross academic, policy, and non-profit borders to interrogate the processes that shape energy infrastructures and uses and ask how a more just energy system could be achieved in the transition to low carbon fuels. Informed through feminist research methods, I engage stories from moments of participant observation and portions of interviews in which participants narrate their experience of working in the electricity sector in an effort to

represent the plural ways in which people know and experience the electrical system. I introduce the method of narrative analysis I will use throughout the dissertation to analyze the personal stories that contribute to policy development.

I start by way of a story from the Partnership for Southern Equity's Just Energy Summit at Morehouse College in 2018 and an early Saturday morning panel on putting energy democracy into practice. It began with Nathaniel Smith, the Chief *Equity* Officer of the Partnership for Southern Equity, who introduced his four co-panelists on the stage, noting they were all women and predominately Black women. It was intentional, he explained, "for those who might not be paying attention" because "women have been the backbone of our social movements." He explained that Black women raised him and "anywhere I go I like to elevate the names of women like Ella Baker, women like Fannie Lou Hamer, women like Rita Samuels, women like Claudia Matthew and others you may not even know who gave their lives so we could be here this morning." Grounding the conversation in the historical struggle against racism and patriarchy in the U.S. South, Smith offered the following introduction to the day's events.

> We're going to talk about racism and energy. And there's a difference between race and racism. And we're going to talk about racism today, so I want to actually start the panel by going backwards a little bit and looking back. And one of the things that we know… we start our conversations a lot of times by framing it around the extreme extraction of natural resources, of fossil fuels out of the ground... But of course, in the South, and if we're serious about the history of America, we have to start back further. We actually have to start with the extreme extraction of Africans from Africa, who came to America against their will … to

> work for free to build this economy that we benefit from today. In the South, of course, it is definitely more prevalent in many ways and so their power - the extreme extraction of Africans and the utilization of their power - actually was the first real place … to begin to have this conversation.

Starting from the transatlantic slave trade and the extraction of people to power plantation agricultural production on Indigenous land in the U.S. South as the first moment of industrial energy extraction,[4] Smith critically assesses fossil fuel pollution, electricity production, and renewable energy adoption within the framework of racial capitalism.

Rooted in this origin point, for the next hour Dr. Mildred McClain, Dr. Shalanda Baker, Becky Rafter, and Leslie Fields detailed specific campaigns to address the local and global manifestations of a racist energy systems materialized in uneven energy burden, undemocratic energy governance, and the high incidence of premature death and disease associated with environmental pollution in communities of color.[5] The panelists named that equity in energy demands a political economic transformation,[6] yet each also highlighted tangible policies to work toward emancipatory futures.

Smith questioned the lasting effects of slavery on the energy system, asking: "if the people in power, don't value the people we're talking about, and are looking at those people as a commodity, and not as human beings, then the policies will manifest themselves in that way." Fields agreed and pointed to the systems of labor organization that disenfranchise poor people in South where "There are a lot of people who are getting involved and working, particularly involved in Texas, Louisiana, and Mississippi, in the energy system, and those folks who also sacrifice to provide for their families don't have

as a big a voice as they should because you don't have the unions that are in the rest of the country."

Energy and labor are necessarily connected as energy systems contribute to the reproduction of a racial-gender hierarchy in the labor force that is both reliant upon and reproduces devalued labor. When asked why it was important to consider energy with a "racial lens," Baker observed, "I tend to feel that energy is everything. And I tend to think that the energy system is what has organized our economy."[7] From this perspective, energy is a necessary site to address the reproduction of racially uneven development in the South and energy policy a place where a counter-hegemonic politics of solidarity can be forged. I follow the provocation of the panelists to think through electricity as it articulates to the racialized and gendered reproduction of labor through long histories of "slavery, violence, imperialism, and genocide,"[8] and the methodological contradictions that the panelists open in working to shift hegemony through policy.

To examine the construction of the electricity system in Georgia and the contradictions of energy policy, I collected archival data, conducted forty semi-structured interviews, and from January 2018 to May 2020, I was a participant observer with the Sierra Club's *Clean Energy for All Committee* and participated in events and actions organized by the Partnership for Southern Equity. In the following section, I detail my methodological approach to engaging as a participant observer in policy debate, design, and questions of implementation that emerged through specific programs and regulatory proceedings.

Policy Analysis

In the previous chapter, I considered the depoliticizing nature of environmental governance and the ways in which feminist geographers within political ecology have sought to bring diverse epistemologies into academic research and policy-making processes. This work recognizes multiple ways of knowing influenced by the standpoint of the knower and the systems of thought in which a knower is engaged.[9] This scholarship repudiates the idea that naming or knowing about injustice is political and instead works to identify and redefine the power relationships that perpetuate uneven development.[10] From this perspective, geographers engaged in public scholarship posit a pragmatic and hopeful optimism for policy engagement based on re-politicization to center diverse ways of knowing and experiencing urban environments.[11]

Envisioning counter-hegemonic politics is possible through democratic processes to design and implement policy. Gilmore proposes that "Policy is to politics what method is to research. It's a script for enlivening some future possibility—an experiment. No matter what we study, scholars are all about the future, about saying something tomorrow or the day after that."[12] Policy here operates in a twofold sense. On one hand, policy research can be used to excavate the legal and regulatory systems that supports hegemony. As method, policy is the means to expose "the very scaffolding of our political imaginations."[13] On the other hand, Gilmore describes, "having gathered all that raw material, all that frightful material, we should use Clyde Woods's blues epistemology to analyze the material. We should use oppositional theorizing and thinking to analyze the material, so that the outcome is not another litany of horror but a regrounding of the terrain of the racial modalities of class struggle."[14] Building on Woods's theorization for

a blues epistemology that guides working-class, Black freedom struggles and a politics of redistribution,[15] she points to research that examines the afterlives of trade policy, industrial policy, and foreign policy that intersect to create the conditions around which people organize. Policy as an analytic frame traces the legal, geographic, and processual contours that create these moments to indicate emergent alternatives capable of building more emancipatory futures.[16]

Across her work, Massey also reflects on her political praxis as a "public scholar" engaged in policy development as a member of the Labor Party policy committee in the 1970s and on the Greater London Enterprise Board in the 1980s. Negating the notion of a separation between "applied research" and "theory," which she insists "can only be harmful both to research itself and to its potential usefulness in policy formulation," she nonetheless argues for policy engagement within the academy, noting that: "To get bigger ideas across, ones which are unfamiliar and may even seem at first quite counter-intuitive, we need both more in-depth and sustained relationship with policymakers."[17] Elsewhere, she observes this political work paired with her writing and teaching at the Open University

> in the UK in a context where the change you want to work towards is so much more radical than currently hegemonic agendas, it has been this longer haul, of trying to shift debate, to change its terms, rather than some immediate effect on policy, that has been the most honest and sympathetic. Being involved in ongoing political struggles means, each time, re-negotiating the nature of one's involvement and responsibility."[18]

Reading Gilmore and Massey together, I understand that engaging policy as a method cannot only be about designing specific policy objectives, but rather working alongside stakeholders to dismantle the scaffolding that supports the reproduction of violent systems. Massey urges that this requires questioning the premises on which policy is developed, including the language and mechanics of the operation of value. It cannot begin from "the political terrain of existing economic policy. The unthought common sense remains undisturbed; it is not brought up from its deep sedimentation in the accepted terms of the social, to be made political in the sense of challengeable."[19] While she proposes beginning with the question of what the economy is for, activists organizing for energy democracy organize around policy to question what electricity, and perhaps more precisely, electricity generated from renewable energy sources, is for? How should it be governed? Who should build it? And who should have access to it?[20] A democratic process to answer these questions requires historical and geographical specificity.[21]

Positionality in the U.S. South

Organizers in Atlanta insist that what works in California does not work in the South and thus policy must be attentive to the particulars of place and the organizing relationships that are built in showing up to do the work, understanding, as Ella Baker described, that democratic organizing must work against the depersonalizing mediation of the value form to build personal connections. The Just Energy Circle operates across its diverse coalition and in conversation with community partners to identify shared interests around urban energy infrastructure and build shared power. Part of its work is educational in trying to foster a collective understanding of electricity's role in urban life

as it was historically and geographically produced.[22] At a community forum of the coalition, Nathaniel cited James Baldwin to explain that "history is literally present in all that we do."[23] Interrogating the historical-geographical articulation of electricity in Atlanta thus illuminates political possibilities to intervene in the progression of history and, in line with Hill Collin's theory of "shifting the center," prioritize the knowledges of communities not historically consulted around electricity by designing policy objectives to influence alternative patterns of everyday life.[24]

Reflexivity is critical to this work. Tagging back and forth between academic and policy discussion can be difficult; Massey observes that "this thinking about, and negotiation of, one's positioning is the toughest part of the whole thing."[25] I see this in my own scholarship which crosses academic and policy publications. Over the four years of graduate school, I worked on as many policy documents, city planning guides for workforce development, and white papers on job training as I submitted academic publications.[26] These white papers were "explicitly political and normative" as a public research agenda must be.[27] In collaboration with other researchers at labor unions, the Sierra Club, the California Workforce Development Board, and think tanks, I made the case for careers that pay family-supporting wages and benefits in the clean energy sector. As a researcher working on my dissertation, my role was somewhat different. I engaged as a participant observer in collaborative work spanning between experts and community volunteers. Most of my participant observation as a volunteer was spent phone-banking, setting up meals and meetings, and participating in rallies and hearings.[28] I strived to build "situated solidarities" with my collaborators which Richa Nagar defines as "inseparable from a deep commitment to ever-evolving critique that is grounded in the

historical, geographical, and political contingencies of a given struggle."[29] I also sought to use the access and authority that my position as a researcher at the University of Georgia offered in solidarity with community-based organizing and to support a public research agenda for a democratic energy system.

During my fieldwork, I did not live in Atlanta, and for every hour of meetings, I sat in three to four hours of traffic driving I-20 or I-85 back and forth from my home in Athens. I missed a lot of happy hours and events to make art and signs for rallies. I tried instead to do what I could from Athens, phone banking and engaging and supporting local work, such as the 100% clean energy commitment that the County Commission for Athens adopted with support from my research collaborators in Atlanta.

In her writing on the U.S. South, Zora Neale Hurston practices a method that is always attentive "to the ways in which theory must be grounded in our lived experience."[30] My analysis of these encounters, which cannot be separated from my positionality, requires attention to my own history and experience as a student, researcher, and organizer. Situating myself in this story as a white woman from the South, I sought to practice radical vulnerability, which Nagar argues is necessary to solidarity, and "demands that alliances across starkly unequal locations open themselves to critique."[31] Interrogating these interactions is thus also a way to practice minor theory in "its aspiration to revolutionary consciousness through a disavowal of mastery and embrace of marginality—a marginality that recognizes and relates to all that it edges and all of its edges."[32] Working at the edges of energy transition, I ask how electricity is experienced in the everyday for the practitioners engaged in its reproduction. This embodied account captures and analyzes my complicity in these structures as a way to

understand the intertwined and conflicting roles of race, class, and gender within energy policy development.

Data Collection

My research included more than two years of participant observation in organizing around electricity in Atlanta primarily through the Sierra Club and events hosted by the Partnership for Southern Equity, including the Just Energy Summit discussed at the top of this chapter, and meetings of the Just Energy Circle, which brings together nearly twenty different grassroots and mainstream groups who represent interracial and intergenerational community advocates including energy policy wonks, solar developers, environmentalists, faith leaders, and racial justice organizers. The Sierra Club is one of the "mainstream" members of the Just Energy Circle. It is also among the "Big Greens" and has the largest membership base of any environmental organization in the U.S. with more than one million members.[33] My work with the Sierra Club began because of my pre-existing relationship with Larry Williams, who is the Labor and Coal Coordinator at the national Sierra Club and works also with the Environmental Justice and Community Partnerships office with Leslie Fields, who was introduced at the top of this chapter. I met Larry when I was working with the University of California, Berkeley Labor Center in 2016. His work within the Sierra Club and as former president of the Progressive Workers Union has directed resources to support Black and migrant organizers as well as anti-racist and labor organizing within the Sierra Club and environmental and energy policy. His work also advances wider efforts to broaden organizational priorities from the Sierra Club's historic mission for conservation and

wildlife preservation to environmental justice, economic transition, and climate change.[34] While its politics are changing, the Sierra Club's paternalistic position toward environmental justice groups is central to their legacy and reputation. In Georgia, the majority of the Sierra Club staff and members are white. In my time volunteering with the Georgia chapter, Marquese and Neil recruited more diverse volunteers who engaged in much of the advocacy for clean energy and cheaper electricity bills in Georgia. Efforts to shift the organizing culture of the group created tension throughout my time engaged in this research. This discomfort points to on-going struggle to contest the articulation of electricity, white supremacy, heteropatriarchy, and New South progressivism in Atlanta.

I triangulate this observational data collected in detailed fieldnotes with data collected through forty semi-structured interviews with labor organizers, environmental and environmental justice organizers, public officials and consultants working with the City of Atlanta and state Public Service Commission, solar installers and lobbyists for the solar industry, and job training providers (see Table 3.1 below). In cases where I found myself, "studying up,"[35] I asked questions of my interviewees that had been brought up in meetings with the Sierra Club and Just Energy Circle to share the ideas and concerns of my collaborators who were not in the room. I understood every meeting and interview as a two-way interaction. As much as I was learning about the politics of urban energy, other people had questions for me. Using interviews both to gather information and disseminate coalition ideas is a small way to democratize the spaces that reproduce inequitable energy infrastructure and reinforce racial, gender, and class difference.

I also collected archival information using the Internet Archive's Wayback Machine to find reports, press statements, and organizing platforms from the Apollo

Alliance and other green jobs campaigns discussed in Chapter Six. Factiva, LexisNexis, Newspapers.com, and the Georgia Historic Newspapers Database were also useful to chronicle electricity and workforce development in local and national news media. I reviewed Georgia Power's archives at the Kenan History Center, the records of the Southern Region of the AFL-CIO Civil Rights Department at the Southern Labor Archives at Georgia State University, and various oral histories from public officials stored in the Richard B. Russell Special Collections Library at the University of Georgia.

Table 3.1 Summary of Fieldwork

Research Approach	Category	Number	Individuals	Hours
Semi-Structured Interviews	Labor organizers/ researchers	9	11	6
	Environmental/EJ organizers	8	9	7
	Public Officials/ Consultants	8	9	10
	Solar Energy Company Employees	9	10	7
	Job Training Providers	6	8	6
	Sub-total	40	47	36
Participant Observation	Public Service Commission hearings/ City Council meetings	9		14
	Workshops/ Conferences	7		82
	Rallies/Town halls	17		30
	Meetings	44		74
	Sub-total	74		200
Archives	Kenan History Center	1		21
	Richard B. Russell Special Collections	1		5
	Southern Labor Archives	1		9
Total				271

Narrative Analysis

I analyzed the reports, testimonies, life histories, and interview transcripts gathered through narrative analysis. I transcribed my interviews and recordings of meetings and coded these transcripts and archival sources to identify personal narratives and collective stories around electricity that point to broader themes about everyday life in households, changes in the social reproduction of labor, and coalition building through clean energy.[36] Susan Chase describes that unlike discourse analysis narrative analysis focuses on the process of telling so as to quote "highlight the versions of self, reality, and experience that the storyteller produces through the telling."[37]

Narrative analysis is a method of qualitative data interpretation that can be used to "connect the intimate details of experiences, attitudes and reflections to the broader social and spatial relations of which they are a part."[38] I conceptualize narrative as an intentional and embodied account that reflects the power structures through which the narrator understands their life's work. Narrative analysis emphasizes the process of telling a story as much as what is said to contextualize negotiated and everyday experiences within a place and time.[39] Narrative analysis dovetails with policy analysis in centering the "subjective and conflictual-nature of problem-definition" that any given policy seeks to address and "the key role of …narrative stories in the negotiation of such definitions" as well as in policy implementation and evaluation.[40] This analytic framework accounts for particular and place-based histories of racial and gender discrimination that inform contemporary politics of electricity and the social reproduction of labor.

Narrative analysis is also relevant given the growth of public narratives that center personal stories and subjective experiences to draw out collective understandings of social problems in energy policy development. This technique of public and political engagement for collective action gained prominence in President Obama's 2008 campaign, which employed narrative as "the discursive means we use to access values that equip us with the courage to make choices under conditions of uncertainty, to exercise agency…. Narratives thus become sources of learning, not only for the head, but also for the heart. Public narrative links the three elements of self, us, and now: why I am called, why we are called, and why we are called to act now."[41] The emphasis on developing a personal voice in relation to an audience draws attention to stories and testimonies that highlight particular individual or community experiences of injustice and make meaning of past events to construct alternative futures.

Stories become a way to embody the alternative knowledge claims and experiences that collaborators and individuals I met shared in hearings, meetings, and conferences. Stories were also the starting point from which many of the people I interviewed explained their relationships to their work, rooting their political organizing in a broader narrative of community, faith, or family. In recounting and analyzing stories, I am not interested in rehearsing or repeating trauma.[42] In observing and asking questions about how electricity contributes to the reproduction of a particular labor system and poverty, I can begin to ask questions about how the energy system could be otherwise.

These stories are also intended to realize connections that intersect in the maintenance, regulation, or use of electricity and shed light also on the ways in which people organizing to change the energy system may replicate the abstract social structures

of the value form reliant upon embodied difference. At the Partnership for Southern Equity Just Energy Summit plenary panel that opened this chapter, Dr. Mildred McClain, a community and environmental justice organizer with the Harambe House in Savannah, Georgia, drew out lessons for political organizing that must start with "frontline communities." There's a role for white allies, she expressed, but not "allies in masquerade" who practice "sneaky racism." She teased out lessons directed to white people in the audience. "Do not try to sneakily take our voice and influence the direction. Come and be in solidarity with our program." In the following chapters, I consider the political challenges that emerge in working to harness "expert" knowledges and "the lived experiences of low-income communities and communities of color." As Fairchild and Weinrub describe, centering the latter is needed to reverse "the racialized impacts of the fossil fuel economy and of climate change… [that] deepen the daily economic, health, and social justice challenges of vulnerable communities."[43]

The movement for energy democracy rejects the "rule of value" that includes the appropriation of social experience to gently reform systems without questioning how they reproduce racist and sexist labor relations. Rather, by building democratic collectivities around the lived experiences of people whose voices are not often heard in policymaking, organizers envision alternative ways of building and managing electrical infrastructures. I begin in analyzing the formation of the urban electric utility in Atlanta, which unevenly shaped the urban form of the city and influenced the design of the regulatory structure that governs electricity in Georgia. These competing influences constrain contemporary efforts by the city government to introduce clean energy and respond to energy burden and climate change.

CHAPTER 4

LIGHTING THE ATLANTA WAY

In this chapter, I take up an urban political ecology of Atlanta's utility to examine the rise of Southern Company's Georgia Power and consider how Georgia Power contributed to New South boosterism and the racially uneven development of the city. Far from natural, Georgia Power's position as a "public" utility with a "natural" monopoly over Atlanta's electrical production, emerged from the conjuncture of white anger, anti-monopoly populism, and financial demands in the period between the Atlanta Race Riot and World War I.[1] Electricity was a "modernizing" force that helped to construct the historical notion of progress in the New South. Electricity also helps to define the margins of modernity. The margins here are a site of primitive accumulation, necessary for capital to reach beyond its limits that are not only spatial, but temporal as electricity makes possible the extraction of value from everyday life. At the margins of early electric infrastructure that relied on coal and capital generated from convict labor and enacted a spatially segregated electrical grid that shaped everyday life for working people,[2] Tera W. Hunter, Tabitha LeFlouria, and David Blackmon examine how appropriation was creatively resisted, and extraction refused. I consider the utility's growth that depended on its active role in reproducing customers and the ways in which this embedded uneven racialized and gendered labor relations. I finally turn to the contemporary moment to examine how the model of electricity provision negotiated through the utility constrains Atlanta today. As the city struggles to address energy

poverty and climate change through its 100% clean energy plan, it is forced to confront the utility's monopoly power maintained through state government.

I began to think about the construction of Georgia Power in relation to Atlanta during a long drive down to the Southern Company stockholders meeting in Calloway Gardens, Georgia in May 2019. I carpooled with two Sierra Club members and we chatted about work, their kids' college plans, and the landscape of loblolly pines and peanut fields. For several years, Sierra Club volunteers had attended the Southern Company meeting. Pressure from environmental activists and pension funds pushed the Company to commit to reaching a no- to low-carbon portfolio for electricity generation by 2050, becoming the first utility in the nation to do so.[3] In advance of the meeting, the 15 volunteers who were attending with the Sierra Club coordinated what we could ask during the question and answer period with the Company CEO, Tom Fanning, focusing on why the low-carbon commitments of the parent company were not visible in the proposed Integrated Resource Plan that Georgia Power had submitted to the state Public Service Commission the month prior.

At the registration desk, we were greeted by a slender white man in a navy-blue suit with parted, blonde hair and glasses. He knew my name and introduced himself as the public relations officer for the Company, asking if he was correct in thinking that I was working on a Ph.D. at UGA? I nodded, surprised that he knew so much about me and the other two people I had traveled with. He introduced us to the government relations chair, a Black man in a gray tailored suit, who joked - without a smile in contrast to the bespectacled man's jovial attitude – that that the Sierra Club and Southern might not always agree, but we can treat each other with respect. It seemed like a warning:

questions were welcome, protest was not. Past the metal detectors lay a full breakfast buffet of bacon and eggs, a display of micro-grid technology from a company that Southern had recently acquired, a hydroponics set-up built by FFA members from the local high school, and a fleet of electric luxury vehicles parked outside. STEM students from local schools and the Southern Company's mid-level management had been invited to this meeting. The Southern employees were racially diverse and included many more women than I anticipated. The shareholders were mostly elderly white couples, a few men wore navy-blue, trucker-style hats emblazoned with the seal of the branch of the military they had served in.

I wandered around the displays before we filed into the auditorium. The Company Board sat in the first two rows, employees and shareholders filled the rest of the auditorium. Tom Fanning started the event in giving a $10,000 donation to the Harris County High School STEM program and thanking two workers who had been on the frontlines restoring power after Hurricane Michael hit South Georgia. After a short presentation, he opened the floor to the audience and for more than two hours, fielded questions ranging from the cost overruns at Plant Vogtle to emergent technologies and natural gas infrastructure in South Georgia. The latter was posed by a man who presented Fanning with homegrown squash, potatoes, and pickled okra. Fanning was gracious, deferential, and friendly. He gave complements and described shareholders who had come to the meeting before as dear friends. The utility was presented as a community member, if not family member, the Georgia Power slogan, "a citizen wherever we serve," embodied in the charismatic Fanning. Yet, he dodged questions from Sierra Club members about the regulatory process and the uneven cost of energy, explaining that no

company talks more about the fact that 47% of their customers make less than $40,000, without mentioning a plan to address energy burden. When I asked about whether Southern would support municipalities like Atlanta and Athens that had committed to 100% clean energy, Fanning thanked me for my organizing and smiled, saying that "we'll support everything that makes sense," however, he pushed back against the idea that anything is truly no-carbon when you look at the supply chain. Meeting a 100% clean energy target for Atlanta might be possible, but Southern had to be concerned with the entire southeast. Nonetheless, he said: "I'm just telling you, green real deal. You can't find a better company to work with in advancing practical solutions for the future."[4]

Fanning's speech was steeped in New South progressivism: The Southern Company would reach 100% low-carbon energy, it was just a matter of time. The self-promotional rhetoric, which sounds better than it actually is for either poor customers or the climate, fits within Charles Rutheiser's description of "imagineering" in Atlanta. He captures the spectacular process of place making by urban boosters through both "aggressive, relentless advertising" and urban design to craft a particular public character that is always future-oriented.[5] The mythology of Atlanta's rise from the ashes following the Civil War to become the capital of the New South is symbolized by a phoenix on the city's crest. The notion of rebirth and renewal is embedded also in the resiliency of the New South creed, which advocated business progressivism to build shared prosperity under a white supremacist racial hierarchy.[6]

Black cultural and academic institutions founded after the Civil War helped to foster the city's reputation as a Black Mecca and helped lead the long civil rights movement that challenged white supremacy across the U.S. Black struggle in the 1950s

and 1960s gave rise to notion of a *New*, New South defined at the level of city government by "the Atlanta Way" of interracial cooperation. The current mayoral administration led by Keisha Lance Bottoms has continued the enthusiastic promotion of shared prosperity under the banner of *One Atlanta*, imagined as a striving city, working to overcome conservative state politics and enormous income and racial inequality with ambitious targets for affordable housing, workforce development, and 100% clean energy.

Postcolonial critiques of modernity emphasize the spatial and temporal notion of progress reaching for the future that is central to racial capitalism. Urban political ecology illustrates that progress also becomes spatialized in the uneven development of cities where very idea of progress relies on a historical or spatial contrast. In Atlanta, historians observe that the New South represents an uncomfortable break with the Old, bringing along a sympathetic and revisionist Lost Cause perspective that whitewashes racial violence and justifies paternalistic politics.[7] The New South progressivism was a contradictory revision that recuperated the paternalistic notion that change would come, but "not yet" for certain people. "Not yet," defines Dipesh Chakrabarty, is a shifting conjuncture of geography, capital, and technology that constitutes the particular and conflicting time scales that define uneven development. The timeline of "not yet" naturalizes "underdevelopment" and racialized poverty.[8] Coronil insists on a historical reading of energy that critiques "the violence of a history made at the expense of the labor and the natural resources of peoples relegated to the margins."[9] Energy is a force that both connects and expands the sites of value extraction as can be seen in the spatial

transformation of Atlanta in which electricity contributed to deepening racial segregation in the city.

A Citizen Wherever We Serve

Atlanta was born of settler colonialism and Indigenous dispossession. In what is now downtown Atlanta, a railroad terminus for the Western Atlantic Railroad that would open up expansion to the West was established in 1837. The railroad occupied land that was forcibly taken from the Creek Nation in 1821 and at its founding, forced removal of the Cherokee who lived in North Georgia was underway. The settlement, initially named Terminus and later Marthasville, was formally chartered as Atlanta in 1847 and began to grow as a trade and commercial center given its position at the confluence of several railroads. Following the Civil War, in which much of the city was burned, Atlanta was named the state capital and quickly began to grow. Its population mushroomed from less than 10,000 residents before the War to 65,000 in 1890 as formerly enslaved people and poor white people migrated to the city for work.[10] Tyler McCreary and Richard Milligan point to "enduring forms of socio-ecological segregation" engineered into Atlanta during its "rebirth" and growth as a transportation hub and commercial capital of the Southeast.[11] Electricity is another relation that shapes the racially uneven development of the city.

Civic boosters intentionally cultivated the image of the burgeoning and striving city in defining a zealous and forward-looking plan to build a "New South."[12] The "New South creed," most often associated with newspaper editor Henry Grady, promoted a modern myth of economic prosperity and social uplift based on technological progress and racial harmony.[13] The regional identity that Southern commercial, financial, and

industrial leaders cultivated was steeped in Southern heritage and espoused the Lost Cause while selling also the unique advantages of the South's cheap labor, natural resources, and open land in working to attract Northern investment. The ideological representation of a reformed and modern South belied continuities with labor practices from the Old South as workers coerced to labor under the convict leasing system made bricks, mined coal, and built roads that formed the growing city.[14] The New South boosters "advocated public and private investments in human capital…to upgrade the work force and prepare the region for economic progress."[15] Efforts to educate future leaders and workers remained segregated, although Atlanta was especially important as Black intellectual center. The six universities that comprised the Atlanta University Campus educated many members of the Black middle class.

Electric power was central to urbanization that began to take off in the 1880s.[16] Cater observes that "from the beginning, those who led the electric utility industry's expansion claimed that their business would be crucial to Dixie's regeneration."[17] The first history of the Georgia Power Company espouses the civic-mindedness of the project as "it appears that those who organized and promoted the Company were motivated primarily by a spirit of pride in Atlanta which they did not want to lag behind other towns. The Company's principal business in the beginning was to furnish street lighting to the city."[18] When Georgia Power's predecessor, the Georgia Electric Light Company of Atlanta was founded in 1883 there were less than a dozen manufacturers in the city. The Company was taken over by H. M. Atkinson, who embodied the alliance of Southern boosters with Northern capital, having moved to Atlanta from Massachusetts to work as a cotton sampler and buyer before becoming involved in banking.[19] Under his leadership,

the Company began to offer "round-the-clock service" to support Atlanta's growing industry.[20]

The arrangement of a private company providing electric power for the city was challenged at the turn of the 20th century when Atlanta's mayor questioned the rates that the city was paying for streetlighting. For over a year, the city council debated buying out the company to operate their own lighting if the Company could not lower its prices. This was impossible, insisted Atkinson given that the Company's returns were already less than six per cent on its investment. Nonetheless, in 1900 when the city put out a bid for electric lighting, the Georgia Electric Light Company won the contract over the Atlanta Railway and Power Company, which was the first electric streetcar line founded in the city. Two years later, the city council allowed these two rivals to consolidate under the condition that the newly formed Georgia Railway and Electric Company begin to pay taxes and recognize continuous transfer for streetcar riders across the city. The Company erected new infrastructures that channeled coal and water resources into the city necessary for the material reproduction of burgeoning commerce and industry. These socio-ecological flows also enacted particular ecologies of labor exploitation as Atlanta companies imported coal mined through convict labor in Eastern Tennessee.[21]

The Georgia Railway and Electric Company only grew in importance to the city as electricity and electric streetcars fueled the uneven growth of the urban environment. In the late 19th century, electric trolleys and streetcars influenced racial and class segregation. The streetcars fostered suburbanization by connecting wealthy white residential enclaves to the central business district while also shaping residential and daily commuting patterns for Black domestic workers.[22] Between 1880 and 1910,

Atlanta's population swelled. The number of Black residents tripled while the share of white residents grew even more to comprise two-thirds of the population. Population growth contributed to pressure for jobs and municipal services.[23] Streetcars, theaters, night clubs, and avenues illuminated with electric lights also created new social spaces of racial mixing where the racial tolerance promoted under the New South creed was tested. Hunter describes that "the streetcar replaced the railroad as the most visible icon of the aspiring metropolis and became one of the first institutions tainted by official Jim Crow regulations."[24] In 1891, the Georgia State Legislature adopted the first Jim Crow measure to enforce racial segregation on public transport and gave streetcar operators police powers to enforce the law.[25] Black residents led numerous boycotts between 1892 and 1906 when the companies tried to institute the law, leading, at first, to limited enforcement by operators who were interested in maximizing ridership.[26] Populist politicians and newspapers responding to and riling up racist sentiment denounced that white workers had fallen into the "hands of grinding monopolies" and again raised the issue of municipal take-over of the Company.[27]

Racial tension on the streetcars came to a head in the 1906 Atlanta race riot, which transformed the geography of the city and its electrical system. It was caused in part by sensationalist newspapers that reported false stories of alleged assaults by Black men on white women. On the night of September 22, 1906, mobs of white men destroyed Black businesses and attacked streetcar riders, killing between twenty-six and forty-seven Black residents. During the night, "white rage was focused upon three public areas where blacks and whites interacted as equals on streetcars and in the two entertainment districts."[28] In the aftermath of the riot, the white elite of Atlanta gestured to work with

Black community leaders in an effort to improve the image of the city and restore law and order, however, measures to prevent further violence expanded race-based zoning and de facto segregation.

For the electrical network and streetcars, the riot had profound affects as white working-class customers continued to militate for public take-over to enforce racial segregation laws. Cater argues that in the wake of the riot, the Georgia Railway and Electric Company proposed regulation under the state railroad commission as a way to protect the Company from renewed calls for municipalization.[29] Atkinson had been a vocal proponent of regulated monopolies in the South as a member of the National Electric Light Association's Legislative Policy Committee, and Georgia became one of the first states to pass monopoly regulation.[30] Unlike in other states, commissioners in Georgia would face popular election. This move pandered to "popular demands for the enlargement of white democracy," and was followed by an amendment to the state constitution in 1908 to disenfranchise African American voters.[31] Regulation proved sufficient to win over the Company's strongest opponents, including in the press. The *Atlanta Georgian and News* proclaimed the measure to be among the legislature's signal accomplishments as it "established white supremacy and enthroned a commission" for the regulation of the railroads and utilities.[32] State regulation over electricity and white supremacy are coupled logics that articulate to the business model of New South progressivism.

Electricity was also used to sanitize the image of the city after the Race Riot. Lights glittering in store windows along "The Great White Way" at Five Points where the railroads met represented a modern and orderly city.[33] Segregated amusement parks in

Ponce de Leon and Piedmont Park also sought to draw white families to downtown.[34] These benefits did not extend to Black neighborhoods where city and utility officials were slow to extend streetlights, parks, and other public services, including streetcar lines.[35] Inadequate and expensive streetcar service reinforced residential segregation and isolated Black neighborhoods. Black Atlantans organized against the Company through boycotts and self-organized transportation. The Colored Jitney Bus Association started in 1922 and operated bus lines along streetcar routes to alleviate crowding and provide a more comfortable service for Black patrons. It was put out of business after the City Council prohibited buses with less than seventeen seats from operating in the city at the urging of Georgia Railway and Electric Company.[36]

In 1945, the Southern Regional Council further observed that "no outlying Negro sections are served by trackless trolleys and buses, nor are there any of these sections served by feeder bus lines. These services are made available to many, although not all, outlying white sections of the city."[37] One resident wrote the mayor to explain that "Many steady, hard-working colored couples have long wanted to buy lit-new clean houses instead of living at a rental of over fifty dollars monthly in half of a dilapidated house discarded by white people."[38] In addition to redlining, racial covenants, and zoning measures that restricted where African Americans could purchase homes, for many able to realize the dreams of homeownership further outside the city center, it was difficult or impossible to pay the high fares to get to work.

Electric streetcars remained a site of racial mixing, marked by discrimination and terror as conductors used their police powers to enforce ambiguous, yet segregated seating arrangements within the streetcars.[39] In 1946, white drivers armed with service

pistols wounded John R. Owens and murdered Madison Harris and Walter Johnson.[40] All three men were veterans and all three cases were dismissed before a jury trial by the same judge. Georgia Power employees packed the courtroom for the hearings on the murders of Harris and Johnson, both of which were dismissed as "justifiable homicide."[41] The Company archives chronicle correspondence with Black ministers, the NAACP, and white riders protesting the inhumane treatment of Black passengers.[42] The extension of police powers to private streetcar companies, which authorized the utility to participate in racial terror that caused premature death, is an important antecedent to consider in the contemporary politics of utility shut-offs in which the NAACP has also championed policy demands to restrict utility's powers to extinguish what may be life-sustaining electrical service.[43]

In 1949, Georgia Power was forced by the Securities and Exchange Commission to sell their stake in the streetcar system that would eventually become the Metro Atlanta Rapid Transit Authority.[44] Following, Black church leaders led a campaign to desegregate transit that Mayor Hartsfield supported to avoid the boycotts and demonstrations seen in other cities across the South.[45] Cooperation between Black and white elites known as the "Atlanta Way" has since characterized urban governance. However, this political cooperation has not always served working-class people and did not repair inequity built into urban infrastructure, in which electric providers played an important role.[46] Electrical infrastructure helped to perpetuate racial difference within the city where Black residents faced violence on the streetcars that further segregated urban environments. As Donald S. Moore, Jake Kosek, and Anand Pandian argue, race and

nature work together to "legitimate particular forms of representation, reproduce social hierarchies, and authorize violent exclusions."[47]

The domination of nature coupled to white supremacist institutions in Atlanta comes into focus through the extension of the Georgia Railway and Electric Company's control over Georgia's waterways. Throughout this period, the Company sought to defend corporate electric provision through the Railroad Commission (later renamed the Public Service Commission) from calls for municipalization within and outside Atlanta. The Company's control grew outside the bounds of the city when state legislators capitulated to the Company's control over rivers and streams, allowing Georgia Power's predecessors to build and operate dams.[48] When the Company sought a rate increase to cover the costs of construction, the Railroad Commission protected the financial interest of the public utility and authorized the increase during WWI, despite the protests of the City of Atlanta and other petitioners against the rate hikes.[49]

Waterpower, insisted Georgia Power Company President Preston Arkwright, was not "a natural resource, God-given,"[50] rather, as a Railroad Commissioner explained, "The water power developed by these industries and now dedicated to useful public service, for centuries past remained undeveloped and wasted by Georgia owners and interests. The State has need of outside capital in the development of its great resources" and therefore invited companies to take on the financial risk rather than cities or the state government.[51] However, the risk taken by private companies was not without state support. Rather, Cater describes that "governmental power proved crucial to the materiality of hydroelectricity and to the protection of corporations' standing as the sole agents for structuring flows of the hinterland's natural resources."[52] The decision of the

Railroad Commission to increase rates cemented the state's fiduciary responsibility to ensure the financial well-being of private electric providers that offered a "public good." The authority of the Commission was later upheld by an appellate court and took much of the regulatory power over the utility away from the city and invested it at the state level.[53] In 1926, Georgia Power Company was formed from the combination of other hydropower interests in North Georgia and would soon extend across half of the state's territory.[54]

The natural monopoly protection for the utility that dominated and transformed the ecology of North Georgia waterways to direct power to urbanizing centers of energy demand was a political process.[55] Fighting off the "socialistic" incursion of public power that posed a "threat to democracy" remained an on-going battle for Georgia Power with the expansion of the Tennessee Valley Authority during the Great Depression. Georgia Power defended their service territory and eventually negotiated to purchase power generated from Tennessee Valley Authority dams. The New South vision of social improvement and perpetual economic growth promoted by paternalistic, business elites depended upon state and federal government support to develop and maintain monopoly protection. This history indicates that the particular consolidation of Georgia Power's monopoly control over the region emerged from the conjuncture of state, financial, racial, and commercial relations that constructed the utility and its corresponding regulatory apparatus. Strikingly, in testimony before the Federal Trade Commission in 1930, Georgia Power Company President Preston Arkwright, spoke in his capacity as Chairman of the Public Policy Committee of the National Electric Light Association, explaining much the opposite, that "the electric light and power industry—and the National Electric

Light Association—is opposed to government in business, and particularly opposed to government or state of municipality of the Federal government, or political subdivision, taking over or engaging in the business of supplying electric light or electric energy."[56] Nonetheless, Arkwright went on to detail numerous strategies of the utility and trade association to curry favor with not only elected officials on the Public Service Commission, but other civic leaders.

In an effort to promote the electric industry's particular model of doing business, the National Electric Light Association engaged in a massive outreach campaign, directing propaganda to groups ranging from the Boy and Girl Scouts to the Kiwanis Club and the League of Women Voters. Material revealed in the hearings noted the important role of religious organizations, most egregiously "In Georgia [where] 10,000 copies of the utilities literature was mailed to ministers, lists of persons in every community, public officials and lawyers… [and] also furnished to the Young Women's Christian Association and the Y.M.C.A."[57] The trade association and individual electric companies, including Georgia Power, which worked with Georgia Tech in Atlanta, gave financial contributions to universities and hired professors to study the emerging industry. In part, companies sought to influence the training offered to economists, engineers, and lawyers in public utility design and regulation. Cultivating the kinds of regulators that would be amenable to the Company's business strategy was necessary through any and all means of outreach to civil society organizations. The notion of electricity as a commodity that is privately provisioned by a "natural monopoly" became common sense through the onslaught of propaganda in trade journals, newspapers, and public proceedings before regulatory commissions, in which private utilities asserted themselves

to be “public utilities” or “public service” companies, who employ “public servants.”[58] Arkwright employed the following analogy to justify the utility’s propaganda efforts:

> I know down in my state, in Georgia, they examined the text books down there and found out, by accident, that the history books that they taught in the schools were written from the Union side on the matter of the war between the States, and did not do justice to their own side, so they therefore set up an investigating body to examine the history text books used in the Southern schools, teaching to their children, in order to see that incorrect representation and injustice should not be done to the Confederate cause and taught to their own children. It is proper too, that with the responsibility for this industry, and we are the responsible people for it, it is proper, I should say that we examine the textbooks that have reference to the industry , or the rules of it, to see what they teach; that is, so far as I know, the extent of what we have done on that subject. We may have gone farther in some cases and had the text books corrected. Individuals may have gone to the extent of having text books changed or corrected in the making.[59]

The Georgia Power President drew a direct parallel between the Lost Cause and the commodification of electricity as part of an ideological project to author the history and future of the New South. Electricity became central to this project as a modernizing energy source that powered the racially uneven transformation of space and time. The utility not only advertised its business model to universities and civic organizations, but also expanded advertising and promotional efforts to attract new businesses to Georgia and win over new customers, contributing to the acceleration of segregated sprawl that transformed the spatial extent of Atlanta. In the next section I will analyze the utility’s

efforts to increase its customer base that reworked everyday life in the city, creating new forms of waged labor and bringing new moments of unwaged labor within the value form.

Reproducing Customers

In the early 20th century, Georgia Power not only cultivated regulators, but also a diverse customer base through discounted rates for large power consumers willing to shift production to off-peak times. To make a power generating station profitable required a diverse customer base to maximize use throughout the day and night.[60] Matching demands made by its streetcar lines that used the most power at dusk and dawn to municipal lighting systems and amusement parks at night, factories during the day and night shifts, and homes in the morning and evening, Georgia Power profited by driving the development of a 24/7 economy. The company history notes that "next to the manufacture of electricity, a utility's most important product was the manufacture of customers."[61] Georgia Power promoted energy intensification of homes and businesses through advertisements for air conditioning, electric water heating, kitchen appliances and subsidized sales of machinery.[62] Its photo catalog "Bright Lights" showcased lighting improvements that illuminated gas stations, grocery stores, and night clubs to enable convenient, longer hours for customers. These pictures foreshadow the "on-demand" economy. Electrification transformed the patterns of everyday life for Atlantans, rewiring existing systems of production, changing the material processes of manufacturing, transportation, finance, and information and communication technology. In a speech before the Edison Electric Institute in 1926, Arkwright emphasized that, "We enter

intimately into all the life of the community, into all the homes and all the stores and all the industries and all the activities. There is no other business that does it so generally, so intimately as the business of ours."[63]

These intimate circuits imply a personal relationship between the utility as a community member, a citizen, and a welcome visitor in the interior, private, and individual spaces of home. Electricity is such a part of everyday life that Bakke names "the grid is my intimate."[64] Reading these connections through the framework that Lowe provides necessitates consideration of the relations of "differentially laboring peoples,"[65] and the historical transformation of the forms of work that connect through the electrical grid, which reveal the uneven processes of valuation that structure time for Atlanta residents.

Electrification reworked intimate geographies of cities by domesticating "good nature" that "became part of (and a basic precondition for the construction of) the protected inside of the modern home."[66] Georgia Power marketed kitchen and household appliances in an effort to increase residential consumption and actively promoted the transformation to household reproductive labor through more efficient time management. Advertisements spoke to the "modern" housewife and promoted the time saving capacities of electric appliances in hours saved per day over years. An electric range could save 14 eight-hour days over years, promising the ability to "produce more, in less time if it's ELECTRIC." A refrigerator could save "time and money," up to eight and a quarter eight-hour days over a year. With a washing machine, a housewife could "wash without work," and save six eight-hours days annually in the process.[67] These miraculous and modern timesaving appliances used only a few kilowatt hours each month.

In saving time, women could not only care more effectively for their families, but also "turn back the clock" because "Drudgery, crushing out youth, began to vanish as woman's penalty for her sex when the electric light was first introduced into the home…. Electric service has created a brand-new environment for all of us, and of all its benefits, womankind has reaped the major share—in increased years of youth!"[68] Reinforcing a gendered and racialized understanding of time, Georgia Power's home economics team aggressively marketed electrical appliances to women. Mobile electric kitchens staffed by "husband-and-wife teams" toured the state to teach women how to use new technologies and demonstrate "how electric living was better."[69] These applications of "domestic science" described how new household technologies could give "the modern housewife a sense of personal expression and helped her to feel secure in the knowledge that she was guarding the health and welfare of her family."[70] Through electrification, the "tyranny of time" becomes the "normative measure for activity," extended to all aspects of life's work for the housewife and those who she employed.[71]

During World War I, as women began to enter paid employment in clerical or war work, this "expanding middle class could no longer find servants for housework," leading electric companies to suggest in advertisements "that housewives consider 'electric appliances as their servants.'"[72] Georgia Power's advertisements picturing illustrations and photographs of white housewives used the character Reddy Kilowatt to market electricity as "an economical and willing servant who works long hours at low wages" and could "emancipate" white women from wearying social reproductive labor. In Atlanta, Black women performed much of this work in white, middle-class households.[73] While new inventions such as washing machines returned chores to the home that

households had previously paid to have done by others, in the South, Black women continued to work in large numbers in domestic service until the Civil Rights Movement when Black workers fought to desegregate other workplaces.[74] During this period, as more white and middle-class women began to work outside the home in greater numbers, a new market for services, including domestic service and housecleaning work emerged, which continues to be an occupation primarily held by Black and migrant women. This labor of domestic workers, childcare providers, and home health aides remains "underpaid, undervalued, and under-protected."[75] Working mothers most often work more than working fathers in a "second shift" of household labor.[76] While electric living transforms the time intensity of reproductive labor, time continues to be differentially valued across gender, race, and class.

Electric living also made the South more attractive. With air conditioning and electric heating, Georgia Power professed that households could even control the seasons. Southern Company recruited residents and industry to the region under the banner "Move Forward, Move South."[77] This aspirational promotion of an electric way of life wedded to high electricity consumption advanced also a particular form of labor relations articulated to the utility's model of economic development in the growing southern market. In 1927, following the consolidation of Georgia Power, an annual report was issued to tell the history of the Company and share the bountiful advantages of Georgia.[78] The foreword illustrates Georgia Power's beginnings. The word POWER is etched into the clouds against a dark sky. In the foreground sits a small brick power plant at the base of a waterfall and connected to electric transmission lines that reach outside the frame. Emerging from the waterfall and fading into the clouds is a Tarzan-esque figure. This

racist imagery anthropomorphizes the "natural" power of Georgia's waterways, heretofore untapped and made available to the enterprising "prospector." This colonial appropriation of both land and water and an imagined Cherokee history after which waterways such as "Bull Sluice" and "Terrora" are named serves to naturalize the utility within Georgia's landscape.

The next sixty pages are a detailed account of the business potential that Georgia's electric grid makes possible, firmly entrenched in "[t]he prophetic vision of Henry W. Grady, when he pictured the Old South dead and predicated the New South as a land pulsating with life and surging forward eagerly." Ripe with possibility "that exceeds the prophecies and expectations of pioneer residents…progress and prosperity have become keynotes in this period of the State's history." Georgia offers bountiful resources extending beyond Atlanta from the ample workforce, raw materials, low taxes, educational institutions, transportation, "and a cooperative spirit throughout the State." Of particular interest is the utility's characterization of the workforce:

> The State is blessed with a supply of laborers of a pure Anglo-Saxon strain, and both skilled and unskilled labor is available in abundance. Out of a population of more than 3,000,000 less than 17,000 Georgians are foreign born, thus assuring a clean and wholesome American atmosphere…Strikes are almost unknown in Georgia.[79]

The Company pictured their own, segregated workforce at company picnics and baseball games to illustrate the pleasant quality of life potential employers would find in Georgia. However, this lily-white picture of modern Georgia powered by electricity espouses both anti-immigrant sentiment and erases the intimate connections between white and Black

workers employed by Georgia Power.[80] The anti-union sentiment of the utility's promotional material is also at odds with their own organized workforce, as I explore in the next chapter. A later report classifies "the efficient and abundant reserves of labor" in Georgia as "plentiful and adaptable" to whatever a potential investor might require.[81]

These annual reports were coupled with advertisements in newspapers across the country that boasted of the climate and industrial potential of the South and brochures targeted to specific industries. Industrial growth in poultry, defense and airplane manufacturing, and paper mills was also encouraged by the utility. Promotional movies described the time saving capacities of electrified farming. Films tailored to the poultry industry encouraged this emerging field that would become one of the biggest industries in Georgia.[82] Manning Marable described these effects for "Black farmers are driven off the land, coerced to work at low wages while paying skyrocketing utility bills."[83] The utility reproduces the labor reserve, who Marx identifies as "doubly free" workers, while creating new needs for commodified electricity.

Georgia Power was not only advertising its electricity, but the New South model of business progressivism based on access to low labor costs and low taxes. A comprehensive study of new manufacturing plants in the South produced by the National Planning Association reported that with few exceptions, "electric power alone attracts few industries to a region," but the "general locational importance of electric power is best described as 'improving the industrial environment.'"[84] Natural resources, access to markets in growing Southern cities, as well as through ports and rail lines, and labor availability and attitude were the reasons cited for plant location. The age, gender, race, and skill level of workers are all taken into account. Some textile operators reported a

preference for rural communities where they would be the only employer, making unionization less likely, one explained: "We're not running away from union, we're just staying away from them,"[85] and operators also relied on a racial and gender division of labor within factories.[86] Textile manufacturing was the first industry to electrify and vehemently fought increased labor standards pushing right-to-work policies across the U.S.[87] Georgia's right to work law adopted in 1947 came into force with the subsequent passage of the Taft-Hartley Act.[88]

A subsequent survey of town mayors and chamber of commerce officials reported that Georgia Power and the state Department of Industry and Trade were the most important economic development agencies in Georgia. And a corresponding 1972 survey of companies concerning seventy-one plant location decisions showed that "local organizations had been more involved in the 48 midwestern plan location decisions, but state, utility and railroad promoters had been more active in the South."[89] Where electricity might not have been the prime reason for relocation, Andrew Marshall Hamer describes it as an essential feature within the conjuncture contributing to Southern industrialization.[90] From 1940 to 1970, the share of electricity produced in Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee increased twentyfold and powered new plants, mills, and mining operations connected through growing road and air transportation networks. Electrification transformed the spatial extent of manufacturing. Malm chronicles how coal-powered steam production historically allowed for concentration in cities,[91] yet, in Atlanta, remarks Hamer, electric power

> eliminated the cumbersome arrangement of powered machinery around a central source of steam power by allowing small motors to be positioned quite

> independently of the power source. Steam power is quickly dissipated at any distance from the source; electric power is not. Thus for the first time it became possible to position worker and machine to fit the optimal flow of materials through a plant. That arrangement, especially where mass production was concerned, no longer tolerated crowded, multi-storied settings. It called instead for land-extensive settings…. In the past only rather self-sufficient, massive works like steel mills, often in search of nonurban raw materials, populated what today are the suburbs. Now the industrial exodus was on.[92]

The demand for space to efficiently lay out electrified plants pushed the borders of Atlanta, already a spatially extensive city, further outward as plants located in the suburban fringes of the city. New paper mills, factories, and processing plants located out from the urban core of the city – just as Black Atlantans demanded a greater share of the social wage – contributing to the sprawl that stretches across the 29-county metro area of Atlanta today.[93] Georgia Power itself remained an important booster for Atlanta as one of the "old-guard members of the business elite."[94] As employers migrated into the northern suburbs, the utility relocated its headquarters from the perimeter to a new high-rise downtown replete with a solar roof.[95]

Georgia Power retains a central place in the city's economic development and planning. Company executives have chaired the Metro Atlanta Chamber of Commerce and sit on other commercial, philanthropic, and public boards. The Company's Community and Economic Development arm conducts research for Central Atlanta Progress and the City of Atlanta.[96] Marable argues that the Company's hold over local

and regional politics helps in coordinating a hegemonic project that defines modernization in the New South such that,

> This small but powerful white elite dominates the energy industry, a group of regional capitalists who also hold major investments in the media, transportation, manufacturing and the universities. This ruling class manipulates popular opinion toward an acceptance of ever increasing residential electric bills, silences civic and political leaders through corporate bribes and timely financial contributions, and has shared a leadership role in the transformation of the Southern political economy from a predominately agricultural to an industrial base.[97]

The electric company was integral to the promotion of the city and the industrialization of its economy, yet the notion of progress was built on the uneven valuation of labor crossing both waged and unwaged work. Reproducing customers through the discounted promotion of cheap electrical power directly contributed to the uneven development of the U.S. labor market.[98] Nancy McLean points to Atlanta's suburbs as a paradigmatic example of shifting labor relations in the 20th century based on a model of economic development that treats the majority of residents "as dehumanized instruments for accruing wealth rather than as subject-citizens."[99] Individuals are valued only for their time spent usefully in work and the bare minimum of state services provided to people dwell heavily on reproducing and training workers as I examine in Chapter Six. Low wages sustained through legal and extra-legal suppression of labor organizing and the refusal of public responsibility for social welfare programs in education and healthcare articulated to the colorblind logic of efficiency and minimizing state spending as white Atlantans fled to the suburbs.[100]

Between 1950 to 2000, workers following jobs relocated to the South and West. Atlanta's population increased in population from 290,157, to 426,821 residents between 1950 and 2010 while the metropolitan area increased from just over 660,000 residents to more than 5.2 million residents. Metro Atlanta's population is still growing faster than anywhere else in the nation except the fellow Sunbelt cities of Dallas, Phoenix, and Houston.[101] The growth of the region remained highly uneven and the "job boom did not produce strong outreach for black workers but drew many young, highly skilled, well-educated non-Southerners into the area, most of whom moved to the suburbs."[102] The suburbs have grown increasingly racially diverse and racially integrated over the last fifty years, yet Atlanta retains the most unequal income distribution in the U.S.[103]

The particular model of economic development that Georgia Power has helped to promote based on the New South ideology of progress in concert with business, civic, and commercial leaders portends a future in which the chasm between high-wage earners and impoverished Atlantans continues to grow. Even as the city has grown in national and international influence, the power of the utility over the city remains strong. Hugh, an energy consultant who worked on Lindy Miller's campaign to unseat Republican Chuck Eaton at the Public Service Commission in 2018, explained in an interview, "utilities across the country are political powerhouses. You know, there's no question about that... But I'd argue in the South, they're even more politically adept than, than in other parts of the country."[104] Challenging to the power of the utility and the particular practices of energy-intensive, uneven growth remain difficult.[105] As the spatial extent and influence of the utility grew outside of the city, its power over Atlanta grew. Seen as a state actor working in the public interest to grow business in Georgia, the economic development

mandate for constant growth that the utility promoted is enforced through state energy and labor laws that have constrained city efforts to put forth its own environmental agenda. In the next section I will discuss these policies that the City of Atlanta has adopted in an effort to decarbonize electricity.

Seeing Green

The utility's relationship to the city unfolds in myriad ways, yet the recent efforts of Atlanta to decarbonize its electrical production and implement renewable energy and energy efficiency in a way that might benefit low-income residents indicate the continued hold of Georgia Power over the city. Efforts by the City of Atlanta to manage its own electrical production are limited by state law that the utility helped to author. Following the 1907 adoption of utility regulation, the Territorial Act Electricity Service Act of 1973 secured the service territory of Georgia Power Company in relation to 52 municipal utilities and 41 membership cooperatives across the state that cover more than 70% of Georgia's land, but serve less than 30% of Georgia customers.[106] The city cannot switch electric providers and retains only limited ability to negotiate revenue sharing with Georgia Power through its franchise agreement, which will not be up for re-negotiation until 2065.[107] Of course, the city also pays Georgia Power for the electricity used in municipal operations.

Georgia Power began research into solar energy in the 1960s and implemented both industrial and residential demonstration projects in the Atlanta metro, even lobbying for state solar tax credits to keep money within the state instead of spending to import oil and coal (a point that the City of Atlanta and solar energy advocates now use in the city's

100% clean energy campaign).[108] However, the utility's support for "alternative" energy sources fell away in the 1980s. With the Edison Electric Institute, the rebranded National Electric Light Association that Georgia Power leaders Atkinson and Arkwright were heavily involved in, the Southern Company spearheaded a campaign to "reposition global warming as theory (not fact)."[109] This regressive turn seen as necessary to ensure the financial viability of the utility that is deeply invested in coal, natural gas, and nuclear defines contemporary energy politics in the South, where fossil fuels powered continued growth.

While the Southern Company committed to a low- to no-carbon energy portfolio by 2050, efforts to reach these targets have not been reflected in decisions made at Georgia Power, other than the continued construction of the nuclear Plant Vogtle as the chosen pathway to low-carbon electricity, which I discuss in Chapters Five and Seven. Georgia Power's opposition to renewable energies articulates to the conservative Christian politics of the state Public Service Commission where the five elected commissioners express little interest in addressing climate change. Despite the goals of the parent company, when I asked Reba, an energy advocate working in Atlanta about climate change, she explained to me "Georgia Power says they refuse to talk about it, because the [Public Service] Commission doesn't believe it's real, so we don't talk to George Power about it, outwardly."[110] The climate denial and tepid support of customer activism for clean energy, as represented also in Fanning's comments to me when asked about whether the utility would support Georgia cities' 100% clean energy targets, indicate that the utility does not necessarily represent the interests of Atlanta residents as a public entity might.

For Roy, a solar energy advocate based in Atlanta, the idea that it is "not yet" the time for renewable energies is a continuation of a paternalistic and anti-democratic politics of the economic development model Georgia Power has pushed since its founding. He explained that

> it would be one thing if well people who say that solar's too expensive and it's an intermittent technology, electric vehicles are a long ways out, they're not affordable, they don't go far, long enough. Battery storage is three years away, maybe when it gets here, they'll change, but the truth of it is that all of this is here, all of its now, and all of it is becoming more cost competitive every day. And so those excuses, … they're rapidly becoming obsolete. And it's a missed opportunity.[111]

In his understanding, the refusal to take on the present imperative of climate change to build out clean energy represents a particular manifestation of the progressive politics of time that is built to sustain the status quo is pushing off change until it might benefit the utility.

The financial model of the utility is based on continual growth of energy demand and continual growth of the power production. Hugh explained that, "Traditionally the utility would go to the Public Service Commission and they say, 'Hey, we have this capacity requirement, we're going to build this gas plant… Here are the costs and we're going to recover those costs over the life of the plant. And you know, it's a great money-making venture, guaranteed 9% 10% ROI and you can't beat that right? … the fact that the traditional utility business model revolves around earning a rate of return on capital investments … continues to be an obstacle" to changing the fuel resources that the utility

uses. The challenge for stakeholders interested in addressing climate change thus "becomes, how do you remove that? How do you change that incentive structure?"[112] Across the country, states have mandated more renewable energy and energy efficiency investment through renewable portfolio standards intended to decarbonize electricity production and reduce the demand for energy supply that needs to be built to begin with.[113] Georgia has no such policies in place. Rather, the Chairman for the Public Service Commission prides the state for "using a market-based approach without any upward pressure on the rate payers and no state subsidies."[114]

Where the state has not acted on climate change, the City of Atlanta has enthusiastically forged ahead on efforts to advance clean energy in the boosterish tradition of the New South as city officials set the intention to become a "top-tier sustainable city."[115] In the leadup to the 1996 Olympics, the Turner Foundation, under the direction of media mogul Ted Turner (whose grandson currently serves as Atlanta's Director for Sustainability) and his then wife Jane Fonda, encouraged the city to invest in solar manufacturing to "sell panels nationwide, provide jobs to [Empowerment] zone residents and equip publicly owned facilities such as the new Olympic stadium with an environment-friendly energy source."[116] With such an innovative approach to infrastructure development premiered on the international stage at the Olympics, Atlanta could become the "Solar City" urged the Executive Director of a local conservation organization, Southface Energy Institute.[117] Little emerged from this early vision and subsequent financial support from the Turner Foundation for municipal energy planning was rejected by the city due to disorganization in city hall and other offers for support from Georgia Power.[118]

In 2005, Mayor Shirley Franklin signed Atlanta onto the U.S. Mayor's Climate Protection Agreement to honor the carbon reduction targets set in the Kyoto Protocol.[119] She subsequently hired the first sustainability director for the city to begin a comprehensive sustainability plan that looked at a range of issues from air quality to transportation and energy. City staff researched other cities, and collaborated with business leaders, non-profits, universities, and others to determine ten priority areas for urban sustainability, each of which included a list of "potential green jobs."[120] The plan, *Power to Change*, was released after Mayor Kasim Reed had been elected and under his terms, the sustainability programming expanded.[121]

Selling clean energy improvements for those working within city government required showing the cost benefit analysis that it would not affect the city's budget. Brad, a former city employee, explained that, "the arguments that were made to leadership, whether it's council or the mayor fell under a convenient little saying that was 'green had to be green'… [I]f you can make a cost argument, in support of whatever policy option you wanted to pursue, then wonderful. And there wasn't really much effort put into figuring out what the co-benefits beyond that might be. It was just understood if it was coming from the sustainability office, then you were doing this because it was an environmental effort."[122] While the CFO might understand that the city has to pay its energy bills to Georgia Power, paying up-front for energy efficiency or solar that could lead to possible energy savings down the line or job creation did not fit within the understood demands of the city budget, nor was it seen as a necessary public good. Getting things done at the city-level required cobbling together foundation money to show a project could scale before the city might consider paying for it.[123]

Despite these contradictions, Atlanta has endorsed increasingly ambitious climate targets. In May 2017, the city council adopted a resolution in support of transitioning the city to 100% clean energy by 2035. The resolution arose after a city commissioner and mayoral candidate, Kwanza Hall, dismissed climate change at a candidate's forum. In an effort to show he understood that it was both real, and a serious issue for the city, he proposed a 100% clean energy commitment that was unanimously adopted by the city council. The pledge made Atlanta a "trailblazer" among southeastern cities – it was the first major city in the region to make such a commitment,[124] which applies to all municipal operations, including the city-owned Hartsfield-Jackson Airport, the busiest airport in the world, and all electricity used within city limits.

The ability of the city to reach this ambitious target has been met with skepticism, not least from staff. An employee of the Office of Resilience (renamed from the Office of Sustainability) explained that the resolution came as a surprise to their office, which had not been consulted before it was approved. Tasked with figuring out how the implement it after the fact, they pulled together a team of non-profit officers and consultants from Southface, the Greenlink Group, and the Natural Resources Defense Council to devise a community engagement strategy. Over the course of a year, the Office of Resilience held town halls, conducted an online survey, and led outreach to specific stakeholder groups, collecting feedback from more than 4,000 people. During this process, two primary goals identified for clean energy implementation were equity and economic development, as emerged at the townhall described in Chapter Two.[125]

The call for equity in city energy planning works to address the ways in which electrical service reinforced racial segregation and racialized poverty as advanced by

Georgia Power. City officials observed the numerous ways in which the reproduction of energy systems and low-wage labor are intertwined in surveying stakeholders to devise plans to get to 100% clean energy.[126] The most-discussed equity objectives centered on the cost of energy, making sure that no one pays more for clean energy and that the cost of switching fuel sources is not disproportionately borne by those who are already stressed with high energy burden.[127] The average Atlanta household spends 5% of their income on energy, which is the fourth highest energy burden in the country. Energy burden is even higher for low-income households (10.2%), low-income households in multi-family units (8.3%), African American households (6.6%), Latinx households (6.6%) and renters (6.8%).[128] Energy burden is a complex issue linked to the cost of energy, the physical condition of a home, and the socio-economic status of a household.[129] Low-income households often use less electricity than their wealthier neighbors, but "pay more per square foot for energy than the average household."[130] Electricity was made vital to modern life through the extension and promotion of electrified homes by Georgia Power, however, as a commodity that is essential to the maintenance of everyday life, it is unaffordable to many.[131]

Improving energy efficiency to reduce the amount of energy used by each household has not been a priority of the utility. Georgia Power ranked 32 out of 52 investor-owned utilities across the U.S. for their level of investment in energy efficiency, totaling $56 million across the state, or less than 0.7% of their total revenue (compared to an average of 2.58% across all measured utilities).[132] Any projects that are implemented are spread across the entire service territory, meaning very little investment is available to Atlanta specifically. The Integrated Resource Plan in 2019 failed to move at either the

scale or speed of clean energy implementation that the city would require to address its clean energy targets and do so in a way that would address energy burden for low-income homeowners and renters. Brad explained that the Public Service Commission required Georgia Power to maintain its meager programs that it had proposed to cut, meaning that

> we get to tread water instead of taking a step backwards. We're not making progress, we're just happy that we didn't sink at the moment…. [T]he choices that they're making around energy efficiency are going to make everyone's bills higher, by not investing more towards that resource. And it amounts to a taking, from the customer to the company, on the order, I think was about $400 million in the next three years. And it grows, you know, for the next 10 [years] in their projections.…we're missing a lot of stuff that could be done. We're leaving billions on the table every year that should be staying in our citizens pockets, staying in the state of Georgia's economy, being put to higher, more productive uses, and reducing our overall public health costs. I mean, all of those things should be happening, and they aren't because of the way that this is currently constructed.[133]

Brad names the failure to invest in energy efficiency as a "taking" that amounts to an appropriation of consumer's money and time in wasted energy. The problem of high energy costs, which has built from years of disinvestment in housing stock in the city is enormous. Brad calculated that "the that entire low-income budget's a $2 million budget. The City of Atlanta needs a $2 billion investment to really pull on that energy burden issue."[134] To ensure access to adequate and affordable heating and cooling would require the Public Service Commission to force the utility to change or the city to act

independently. While the Mayor has made affordable housing the signature priority for her administration, she did not engage in the regulatory proceedings at the Public Service Commission. Numerous former city employees explained that the Mayor was nervous about taking on Georgia Power.[135] Brad observed that, "it's not something that doesn't require political capital to do. And not so much within the city limits. I mean, the city residents themselves are *very* supportive of this kind of action. But it's steps where you have to be worried about what's the state legislature going to do? What is Georgia Power going to do? What will the Public Service Commission do?"[136]

In part, the city government fears retaliation. Immediately preceding Georgia Power's Integrated Resource Plan filing, the state legislature threatened to take over the Atlanta airport, arguing that it is a public good used widely by individuals and businesses across the state and could be more effectively managed at the state-level. The City of Atlanta and many workers employed at the airport fought back against this effort to strip the city of one of its most important sources of tax-revenue. The airport is also part of a contracting program instituted under the administration of Atlanta's first African American Mayor, Maynard Jackson, which has been central to growing Black-owned businesses in Atlanta.[137] Linda, an airport employee, asked "with the state taking this on, would they keep that 30%?"[138] Such contracting policies are necessary to ensure that small and people of color-owned firms benefit from public investment.[139]

Beyond energy, the city is limited in in its efforts to push back on the social reproduction of labor that fuels the economic development model that Georgia Power helped to promote. The state legislature also adopted pre-emption clauses that restrict Atlanta from increasing the minimum wage within the city above the state-level,[140]

mandating paid leave, or requiring fair scheduling to reduce the demands for contingent work, all measures to limit the domination of time in everyday life.[141] Facing the constraints of a conservative state legislature, and a conservative Public Service Commission allied to the utility, the Mayor has not been willing to fight to reach the City's 100% clean energy targets, which were for the most part, the priority of her predecessors Mayors Franklin and Reed. Her refusal to take on the utility in the case of clean energy and stalling other measures to finance energy efficiency within the city has led to attrition. Almost every member of the Office of Resilience left to other jobs in private consulting or non-profit work during the course of my research.

Linda said that the enormous turnover in personnel and particularly the resignation of the Director of Resilience Stephanie Stuckey was an enormous loss for the city: "Because when they were doing all that they were doing, this city felt to me exciting and vibrant and moving in a progressive way in a way that we could have risen to the top of this country. I mean, it doesn't feel that way now."[142] She believed the boosterish rhetoric of Atlanta being a "world-class, sustainable city" to be possible with the right leadership in place that could act on its ambitious policy to challenge the hegemonic project of the utility. Addressing the inequalities imbricated within every level of city infrastructure and that define the modernizing ethos of the city were insurmountable without consistent action to implement a different future.

Across the country, the future of the electric utility as a regulated monopoly has been questioned. Hugh emphasized that it "is *the* question" in electricity, noting that "we will always have a need for a regulated utility that manages the poles and wires"[143] but whether a regulated monopoly like Georgia Power should continue to produce energy for

the city is less clear. The governance of electricity that narrowly considers cost for the Company fails to take into account the ways in which people use power or their interests for different resources to be used in electricity supply. Brad insisted: “we have tons of polling data that indicates pretty broad support across Georgia for that type of stuff [that has been adopted in] Atlanta, now Athens, Augusta, Clarkston, other cities have also passed these 100% clean energy goals and widespread bipartisan support for that kind of activity and no support whatsoever at the Public Service Commission or with the utility for it. So, if they were reflective of the opinions of Georgians, if they were putting the public values forward as a part of the public interest, you'd see a different answer at our state level institutions.”[144] However, the broad support for clean energy and action on climate change cannot be examined outside of the political climate where Christian conservatism is married to pro-business politics that support the political powerhouse of the utility. Examining the steps that Atlanta has taken to design and implement a future-oriented clean energy plan illustrate the contradictory definition of progress under the modernizing project of the New South encumbered in hierarchical social relations of race, class, gender, and geography. The city’s efforts to promote the need for swift and immediate action on climate change in the progressive vein of New South boosterism has reinforced uneven outcomes. Those who are able to pay for solar can purchase it for their homes or businesses without addressing the questions of the uneven production of housing, transportation, and energy infrastructure that the utility contributed to and continues to reproduce. In the next section, I summarize the urban political ecological transformation of Atlanta through electrification.

Power to Change

In this chapter I have considered the notion of progress that Georgia Power promoted in building Atlanta's electric grid and the forms of labor organization within households, farms, factories, and offices that stemmed from these circuits in an effort to trace an urban political ecology of electricity in the city. Georgia Power was central to the electrification and promotion of Atlanta. Emerging after Reconstruction to build modern infrastructure for the New South city, electricity enabled the first suburbs as streetcars carried white elites to the urban periphery. These patterns of racial segregation deepened following the Atlanta Race Riot in which the Company sought to consolidate and protect their business model from anti-monopoly populism, promoting regulation, enforcing Jim Crow, and fighting efforts within Black neighborhoods to develop community-based transportation services. The intertwining of electrical production and economic growth shape uneven socio-ecological relations that exacerbated uneven development for Black working class residents of Atlanta. Georgia Power recruited business to the region and built power plants and transmission lines to serve the greater metro area that began to sprawl outwards from the city as interstates replaced streetcars to carry suburban residents away from Atlanta. The model of progress exceeded the bounds of the city and electricity and labor regulation at the state level pre-empt city policy to contest the model of economic development built on low wages and high energy consumption that Georgia Power helped promote. City efforts to change to clean energy exacerbate inequality as Atlanta remains bound to the utility that unevenly values the time of residents.

The commodification of time that the utility perpetuates under the auspices of public regulation depends upon the regularization of time in a way that makes all hours of

the day saleable and brings new forms of waged and unwaged labor within the value form and its operation through difference. Powered by flows of water, the combustion of coal or natural gas, or the charging of silicon on solar panels, electricity transforms the temporalities of leisure and work. Policy to decarbonize electricity makes visible the socio-ecological nature of electrification in connecting these moments to carbon emissions. Beyond highlighting the connections between "ecological change and class relations,"[145] this analysis uses value theory to contribute to a growing effort within urban political ecology to understand the particular ways in which environmental and energy systems also reproduce power relations based on racial and gender difference under racial capitalism. Within the particular model of economic development that Georgia Power promoted, electricity became articulated to the social reproduction of low-wage labor. Economic growth relies upon devalued work performed by women and people of color and restrictions on labor organizing and other forms of collective action for workers to demand the "full value" of their time. The high cost of this vital energy source further exacerbates the conditions of low-wage work as renters and low-income homeowners living in neighborhoods shaped through the racialized geographies of housing in Atlanta face exorbitant energy bills. Electricity contributes to the uneven transformation of the city that spatializes a division of labor reproduced through the changing forms of the social reproduction of labor that I examine in the subsequent chapters on the union, training program, and state. In the next chapter, I delve into the contradictions of Georgia Power's promotion of non-union labor in the South given the relationship the utility has built with its workforce, represented by the International Brotherhood of Electrical Workers.

CHAPTER 5

ORGANIZING ELECTRICITY

This chapter analyzes the union, which both contributes to and contests to social reproduction of racialized and gendered labor relations that serves to devalue the time of some workers in unstable alliance with the utility. In the 20th century, unions fought to standardize employment conditions to win the Fordist family wage and regularize the time of the labor contract to secure a certain number of hours and a consistent work schedule giving workers weekends and daily time for leisure.[1] This model of labor organizing often excluded women workers and workers of color or relegated them to "unskilled" positions. Discrimination in the union was contested at Georgia Power through labor organizing and civil rights litigation through the long civil rights era. I analyze the changing operation of the rule of value between the union and the utility over time. I question how the union's efforts to reduce the contingency of work may change with the increasing adoption of solar that is contracted out to temp workers through power purchase agreements. I contrast conflicting models of a "clean energy" future between the utility and union's support for nuclear and the precarious but growing solar industry where competition with other contractors and the utility undermine efforts to secure the wages and benefits akin to those won by unions.

The contradictions of organized labor appeared in the 2019 rate case before the state Public Service Commission in which Georgia Power petitioned for a $2.2 billion rate increase. On the first day of the hearing, Georgia Power president Paul Bowers gave

the first public comment in a twenty minute address explaining the centrality of the utility to the state as "one of the cornerstones of Georgia's economy and well-being."[2] During the course of the hearing, advocates from the solar industry, senior citizen, faith, and energy justice groups pushed the Company about the costs of Plant Vogtle and the opportunities over-looked in solar and demand-side management to reduce electricity needed through energy efficiency. In turn, numerous people spoke as proxies for the Company, including an economics professor from Georgia Tech, a cement manufacturer who buys fly ash from the Company, a wire maker, a religious charity that Georgia Power patronizes, and the International Brotherhood of Electrical Workers (IBEW), Local 84 which represents over 3,000 Georgia Power employees including linemen, meter readers, and power plant operators. At two different hearings, representatives from the IBEW attested to the need for the rate increase to keep employees safe and in work. The business manager for the IBEW Local 84 spoke on behalf of the "men and women working day and night to power our homes and businesses and keep our economy moving… our line crew members that restore civilization when the storms come through […a]re out in the field performing maintenance work and delivering service to new customers."[3] The business manager asserted the union's steadfast support for the modernizing and progressive vision of the utility as the workforce able to restore power and therefore civilization. In the first hearing, Commissioner Chuck Eaton thanked the IBEW representative for the union's work and enthusiastically lauded the training of union to ensure worker safety.[4]

In the 2018 gubernatorial election between Democrat Stacey Abrams and Republican Brian Kemp, the AFL-CIO endorsed Eaton, the Republican incumbent in the

down ticket race for Georgia Public Service Commission against Lindy Miller, a Democratic candidate and a renewable energy company executive. Eaton was the only Republican candidate who the AFL-CIO endorsed for state-wide election given his support for the nuclear power generating station, Plant Vogtle, which is touted as the biggest construction project in Georgia. Eaton was also the only statewide candidate the AFL-CIO endorsed who won. In an interview to the Atlanta Journal-Constitution, Will Salters, the business manager for IBEW 1579 in Augusta, Georgia which represents construction workers at Plant Vogtle explained the decision as such: "The dignity that comes from having a job is more important than any politics, and Chuck [Eaton] has been about jobs."[5] In the campaign, Eaton leaned heavily on his job creation record while Miller highlighted the high energy costs that Atlanta residents face in part due to the over-budget construction of the nuclear reactor.[6] Commissioner Eaton would also go on to vote in favor of the authorizing $1.7 billion of the requested rate increase for Georgia Power, which I discuss in greater detail in Chapter Seven. However, an important question hanging over the proceedings for union members concerned whether or how the reproduction of labor will change with the growth in solar, which, alongside nuclear, is also growing in importance in Georgia's fuel mix. Preceding the rate case, the Public Service Commission adjudicated the Integrated Resource Plan that required the Company to add an additional two gigawatts of solar to the electrical grid, doubling the existing solar capacity by 2022 while also taking two coal-fired power plants offline.[7]

The expansion of solar on the electrical grid helps to address climate concerns but renewable energies also change the spatial form of electricity production and require much less work to build and maintain. Much has been written about labor union

opposition to climate and environmental policy. Despite the "jobs versus environment" narrative that argues environmental protection and climate change are incompatible, there is a long history of labor union support for environmental and occupational health that traces the history of labor union organizing.[8] Recent calls for a "just transition" for workers that may be dislocated from fossil fuel employment as a result of necessary environmental policy focus on efforts to secure the social reproduction of workers and their families through wage and pension protection, a bridge to retirement for older workers, and job training and placement in new industries, I consider the central, if controversial, role of training in Chapter Six.[9] Just transition was initially coined by Anthony Mazzocchi of the Oil, Chemical, and Atomic Workers union who described that while a company that closed as a result of regulation might "just continue elsewhere, workers do not have that flexibility."[10] Geographers have long noted the tension between capital's mobility and labor's fixity and the active role of labor organizing to resist capital flight.[11] The spatial forms of labor organizing are tied to temporal understanding of the value of labor and the working day. Over years, workers struggled for a standard work week, health insurance, worker's compensation, disability, and a retirement package to provide care beyond the days, weeks, and years of a working person's career. The politics of the wage are fundamentally struggles over the value of a worker's time and engage what Geoff Mann terms a "politics of measure," to contest the valuation of a most-often male worker's time and that of their wife and children who perform social reproductive labor at home.[12] Measure has always been relationally determined through racialized and gendered designations of skill and the time of women, migrants, and people of color has historically been devalued relative to the wage rates that unions first negotiated for white,

male breadwinners. The IBEW, who bargained for labor conditions that reduce the contingency of construction work, support Georgia Power's continued investment in nuclear because it creates a stable source of high-wage jobs even as it exacerbates energy poverty for low-income residents of Atlanta.

In this chapter, I investigate the racial, gender, and class division that emerges between "skilled" laborers in Atlanta and "unskilled" or "deskilled" labor beginning with Cotton States and International Exhibition and Booker T. Washington's Atlanta Compromise speech. I examine how these labor relations map onto Georgia Power and its predecessors, who recognized their employees right to organize in 1916, which cemented the division between "skilled" trade work within the company and "unskilled" positions within and adjacent to it until the 1964 Civil Rights Act. I second examine how the racial and gender labor hierarchy within Georgia Power was contested over time through organizing, affirmative action campaigns, and racial discrimination lawsuits. I third turn to the contradiction of organized labor's strong support for Georgia Power and its controversial investment in nuclear energy expansion. Finally, I contrast the conditions of labor within the company to the growth of solar energy installation companies working outside the utility, which often contract to build new utility-scale solar capacity, yet practice a different model to recruit, train, and employ workers.

The Atlanta Compromise

Labor organizing in the U.S. South began before the Civil War and took off after with the founding of the National Labor Union in 1866.[13] Early trade unions relied upon exclusion defined through race, religion, nationality, gender, and job occupation that

created a segmented labor movement.[14] In the post-bellum U.S. South, many Black workers, who had worked in skilled crafts under slavery and initially continued in positions on railroads and construction following emancipation, were violently barred from railroad employment and racially segregated skilled trades unions.[15] This was typified within the AFL (American Federation of Labor), which formed in 1886 and admitted unions across the U.S. with explicit policies barring people of color from joining, restricting their participation to auxiliary groups, or practicing segregation.[16]

In 1895, the advances of the New South in both industrialization and racial reconciliation were put on display at Atlanta's Cotton States and International Exposition. Among the many exhibits showcasing technology and Southern products, was the Electricity Hall designed under the leadership of the future chairman of the Georgia Power board, H. M. Atkinson, and the Negro Building highlighting African American craftsmanship and art, chaired by Booker T. Washington. On the first day of the exposition, Washington delivered a speech to a crowd of white and Black on-lookers, proclaiming that "In all things that are purely social we can be as separate as the fingers, yet one as the hand in all things essential to mutual progress."[17] His address legitimated segregationist policies that undergirded the progressive politics of the New South and was reprinted with praise in Henry Grady's Atlanta Constitution.[18] Du Bois criticized Washington for accepting incremental steps toward civil and political rights for African Americans. He directs particular criticism at Washington's "unnecessarily narrow" industrial education program that urged Black people to "concentrate all their energies on industrial education, and accumulation of wealth, and the conciliation of the South."[19] Du Bois argued against Washington's assertation that people of color's "future rise depends

primarily on his [sic] own efforts," which "has tended to make the whites, North and South, shift the burden of the Negro problem to the Negro's shoulders…when in fact the burden belongs to the nation, and the hands of none of us are clean if we bend not our energies to righting these great wrongs."[20] Discrimination that Black workers face was much less about skill than racism reinforced through legal, political, and informal means.

Many historians, union organizers, and geographers have examined the role of labor organizing as one realm in which racism is practiced and racial formation occurs. Building on Du Bois's thesis of the "psychological wages of whiteness," Roediger argues that in the North, unions were a place where Eastern and Southern European immigrants became white.[21] The South was not as often a destination for European immigrants, yet unions nonetheless remained important in reproducing a racialized and gendered hierarchy of labor.[22] As the biggest railroad hub in the South, Atlanta was a center of union organizing that was largely segregated. Building and construction trades unions, which include plumbers, electricians, sheet metal workers, and iron workers, among others,[23] controlled licensing boards and apprenticeship training and limited hiring of Black workers by striking and boycotting employers who sought to integrate worksites. White labor organizing restricted employment opportunities for Black workers "to nonunion house or repair work." Further, Black workers "were forced out of some good jobs" and, Marshall writing in the 1960s asserted that "There is no evidence that Negroes were able to enter nonunion industries with any greater ease; indeed, as we have seen, textiles, the south's leading industry has generally been regarded as 'white' work."[24]

Within the electricity sector, which, as I argued in Chapter Four, embodied and energized the modernizing project of the New South reliant upon the devaluation of

racialized and gendered labor, the segmentation of the workforce between "skilled" labor and "unskilled" laborers also emerges. The *Living Atlanta* oral history collection chronicles experiences of Black and white Atlantans as riders and employees in the streetcars operated by Georgia Power's and its predecessors. Initially, the company "only hired white men raised in the country as motormen and conductors, in part to get employees with no union background." The company held massive hiring days that a former streetcar driver A. J. Sharpe described. He remembered: "I grew up in Putnam County, Eatonton, Georgia. We farmed, gristmilled, and dairied. I had a good friend here, G. C. Patrick, and he got after me to come up here and go to work for the power company… And Mr. Patrick give me a note to Mr. G. C. Cobb, who was hiring. He told me just to push—I'd never seen such a bunch of men down there." Mr. Sharpe was hired with 35 others, but the work required long hours under strenuous conditions. The schedule was especially hard for newcomers. I. H. Mehaffey recalled that for drivers who were just beginning without a regular shift, "three times a day you would report [to the barn to see if someone had called in sick;] but didn't get any time for reporting. If you did work, it would be around eleven or twelve hours a day." Another employee said that "They were telling tales that children asked, 'Mama, who was that man in here last night?' … You couldn't hardly spend no time with your family hardly at all."[25] Workers began to organize in protest of the unwaged time usurped by Georgia Power's predecessor in an effort to standardize the workday and reduce contingent scheduling.

In 1912, when the AFL held their national convention in Atlanta in an effort to urge labor organizing in the South, the electrical union's representation was limited to a few employees who had joined the IBEW. The same year, Arkwright explained in a

speech to the National Electric Light Association that "we are entitled to earn, out of the business we go into, enough money to pay liberal wages and salaries. I believe that any employer, any corporation, is better served by its officers, its heads of departments, and its employees, it if pays them fair salaries and wages. I do not believe in hiring men for as little as you can get them to take."[26] Arkwright affirmed that through the regulatory model recently adopted in Georgia, electric utilities should be able to earn a high enough rate of return to pay their employees generous compensation, however, his attitude was adamantly anti-union. Arkwright joked that the Atlanta Mayor James L. Key once said, "that if one of our [Georgia Power's] employees even walked through the Union Depot [railroad station] he lost his job."[27]

During WWI, with wartime inflation mounting, the city pushed back on the utility's attempt to raise fares as the real value of employee's wages fell. In 1916, the electrical workers who operated the plants and powerlines walked out on strike and were followed soon after by the streetcar workers who sought to organize under a different union, the Amalgamated Association of Street and Electric Railway Employees. The dispute between the company and employees was not resolved until the Company conceded to allow streetcar operators, or carmen, to join the union under the conditions laid out in 1918 by the National War Labor Board, which 90% of carmen did. The Company recognized the Amalgamated Association Local 732 but maintained an open shop.[28] The Amalgamated Association struck again in 1920, demanding standardization of schedules and pay increases, and in turn, the Company requested better conduct from employees. A memorandum of understanding "united the company and its workforce in a partnership dedicated to public service" until the utility sold the streetcar and bus service

in 1949.[29] In 1919, the Company recognized the IBEW Local 84 as the representative of lineman and power plant operators.[30]

The unions became advocates on behalf of the utility in one of the earliest instances working through the Atlanta Federation of Trades and the Journal of Labor to lobby for the city's jitney ordinance that prohibited, among other private transportation services, the buses operated by Black neighborhood associations mentioned in Chapter Four.[31] Arkwright spoke in support of the IBEW on numerous occasions, explaining that "the union has proven beneficial to the Georgia Power Company…It has resulted in the establishment of confidence and good-will between employer and employe [sic], and I hope to see the day when we will have 100 per cent union membership among our employes [sic] in Atlanta."[32] Following the 1935 adoption of the Wagner Act, the number of workers organized within IBEW Local 84 increased as the union expanded outside of Atlanta and organized entry-level and service workers who were predominately Black. Laborers were added to the electricians bargaining unit in 1943, janitors, porters, maids, and meter readers were organized as separate sections in 1945 and 1947.[33]

The Wagner Act expanded labor organizing across the U.S. by assuring workers the right to organize, the right to bargain collectively with a union recognized as the official representative of workers, and the right to strike. Workers made particular gains in industrial organizing on assembly mines and in mines. The share of workers represented by a union increased from roughly 7% to 28% of employed workers between 1930 and 1950.[34] For wageworkers, these protections, alongside other New Deal programs embedded in the Social Security Act created good jobs in basic industry and "collective bargaining became a centerpiece of the nation's social welfare regime….

[that] impacted even workers without unions as employers in major industries matched unionized gains."[35] However, organizing wages and benefits through employment also gave rise to "a stratified system, with the highest tier reserved for the white men most likely to hold the unionized, industrial jobs at its core."[36] The New Deal welfare and labor laws entrenched a racialized and gendered labor hierarchy that existed before its adoption. Unionized, industrial work paid a "family wage," but "women's work," agricultural labor, and domestic service paid less.[37] These gains also remained geographically uneven with workers in the South and West less likely to be represented by a union. The U.S. did not establish a comprehensive federal system to secure a "social wage," which refers to "that portion of the working class standard of living that did not derive from wages or from corporate beneficence."[38] For the vast majority of people, economic security was (and remains) incumbent on current or past labor. I take seriously Cooper's feminist and queer critique of Leftist nostalgia for the Fordist family wage that problematizes political calls for a return to a system in which health, education, retirement, and other benefits are tied to a male breadwinner.[39] I read her insistence for a radically different social welfare system that does not rely on heteronormative family patterns alongside Gilmore's calls to expand the social wage to secure the means of social reproduction for all people regardless of time spent employed or the kind of work one does. Gilmore observes that labor unions remain important advocates in the fight for a social wage as well as struggles to protect workers and defend bargaining rights.[40]

The limits to this stratified private benefit system soon emerged. During a mass strike wave in 1946 unions won new contracts that contained "a variety of 'right to manage' clauses … ceding management prerogatives—from the introduction of

technology to the location of plants—to the corporations," which would facilitate the process of plant relocation to the South.[41] Further, the 1947 adoption of the Taft-Hartley Act allowed states to enact measures to restrict labor organizing under "right to work" laws. For labor leader A. Philip Randolph, this presented a geographical problem, "not only do workers in states without the 'Right-to-Work' laws lose jobs by industries moving to low-wage non-union states, but the black and white working poor in the 'Right-to-Work' states of the South, noted for sweat-shop starvation wages, are not free to organize bona-fide unions to fight for living wages."[42] Taft-Hartley undercut Operation Dixie, which the CIO (Congress of Industrial Organizations) had launched in 1946 from Atlanta to organize Southern industrial workers,[43] and also changed the labor contracts of the Georgia Power company. As the Company's official history of labor relations describes, it "validated Georgia's Right-to-Work Law" and reversed the "involuntary union dues check-off" for all workers represented by the union.[44]

At Georgia Power, the collective bargaining agreements that the IBEW and Amalgamated Association negotiated enforced a racialized labor hierarchy within the utility as Black workers were at first strictly limited to the position of "laborer," and were paid less than half the hourly wage of "skilled" white workers in the Amalgamated Association and IBEW. In *Black Reconstruction*, Du Bois laments the bifurcation of labor with the rise of skilled labor organizing in the U.S. South given that

> Skilled labor proceeded to share in the exploitation of the reservoir of low-paid common labor, and no strikes nor violence by over-crowded competing beggars for subsistence could move the industrial machine so long as engineers and skilled labor kept it going. To be sure the skilled labor guilds and capital had bitter

> disputes and even open fighting, but they fought to share profit from labor and not to eliminate profit. Big business with high-salaried engineers, well-paid skilled labor and a mass of voiceless common labor then offered terms to the nation.[45]

Glenn and Mann also examine the racial division between "skilled" and "unskilled" jobs.[46] The building trades unions strived to create a monopoly on skill that historically operated through racialized and gendered exclusion.[47] The racial and gender division of labor within utilities also extended far beyond them, particularly as electrification advanced mechanization and automation that sharpened the divisions between craft workers and "unskilled" workers hired as "hands" to operate machinery.[48] In the *Grundrisse*, Marx observed this contradiction between classes of workers for where "the hand tool makes the worker independent – posits him as proprietor. Machinery – as fixed capital –posits him as dependent, posits him as appropriated."[49] The model of craft union organizing depends upon limiting the number of workers who have access to apprenticeship, licensing, and union membership to maintain the bargaining position to secure the wage premium associated with skilled labor. In the construction industry, contractors who hire dues-paying union members know that they will meet a particular skill level based on their progression through an apprenticeship program to journey-level worker.[50] In turn, contractors agree to pay a wage negotiated by the union, which is often a high hourly rate given the seasonal nature of construction work, and make contributions into the apprenticeship training fund, as well as into the health, welfare, and worker's compensation programs that unions manage.[51] For all these reasons, Trey, a training program coordinator noted that in Atlanta's workforce development world, he understands the labor union to be "the sleeping giant, if you will, right? Because there's

just so many opportunities and there's a lot of resources that are embedded in that labor union model from being able to provide their own training, own jobs."[52]

Unionism is one way in which workers challenge their objectification as a commodity labor-power in joining together to bargain collectively to improve their working conditions. Collective action is integral to capitalism and serves the vitally important role of improving working life.[53] Despite the history of discrimination within the building trades unions in Atlanta presented here, it is important to note that across the U.S., Black workers are the racial group most likely to be represented by a union.[54] While construction labor remains predominately male, in the next section I will discuss Civil Rights litigation beginning in the 1960s challenged discrimination and the role of the union and utility in reproducing a racialized and gendered division of labor define through "skill."

Questioning the Atlanta Way

Title VII of the 1964 Civil Rights Act prohibited employment discrimination and Georgia Power employees soon organized. In 1966, five Black workers filed a complaint with the Equal Employment Opportunity Commission. A year later, the EEOC reported "'reasonable cause'" to believe the company and union were in violation, yet, were unable to broker voluntary compliance. Black workers who were "classified out of the line of progression in all departments which restricts them to laborer posts and limits their promotional opportunities" responded by suing the Company in 1968. The lawsuit also charged that "the company 'maintains segregated comfort facilities.'"[55] Of the 450 Black men that Georgia Power employed, 350 were laborers and 97% of workers classified as

laborers were Black. IBEW Local 84 was named as a co-defendant given its failure to represent Black workers and role in maintaining a promotional system that limited opportunities for Black workers because "laborers must take and pass an aptitude test to receive a promotion and must have a high school diploma or the equivalent," while the collective bargaining agreement between the power company and Local 84 restricted "the use of a test as a condition for upgrading any employee except in the laborer classification."[56] White employees were not required to meet the education requirement or pass a test and their promotion was based on seniority and competence.

In 1971, the court ruled against Georgia Power, which agreed to offer Black job applicants who had been refused positions "the first available jobs for which they are qualified."[57] Three years later, a U.S. District Court issued what was at that point the largest discrimination settlement recorded in the U.S. and required Georgia Power to pay $1.75 million in backpay to 360 Black workers as well as pension benefits to workers who had retired or were soon to retire. The use of non-job-related aptitude tests and educational requirements was prohibited and the utility mandated to meet hiring quotas to increase the share of Black workers from 12% to 22% in the electrical union, 9.6% to 22% in the clerical workforce, and less than 1% to 6% in managerial positions.[58] Despite these charges, the history of utility labor relations authored by a former Georgia Power vice president asserts that "The Company did not and does not, to this date, acknowledge guilt as charged by the Justice Department."[59] The utility would blame racial discrimination on the union and cited its intent to increase racial diversity for its decision to hire a non-union contracting firm in the 1970s. However, on-going complaints of racial discrimination within white and blue-collar work at Georgia Power evidence that both the

utility and union were complicit in structuring the social reproduction of labor to devalue the time of Black workers.

During this period, the NAACP brokered a "fair share" agreement for Georgia Power to increase banking, procurement, advertising, and hiring from Black-owned businesses and of Black workers,[60] but lawsuits still continued against the Company.[61] Four Black workers brought a lawsuit alleging they were terminated 48 hours after reporting harassment and offensive working conditions at Plant Wansley that had caused about 100 Black and Latinx workers to quit their construction jobs at the site between 2001 and 2002.[62] In 2000, another was brought by three company employees in an effort to win class action status to be able to represent all 2,100 Black employees at the company. They charged "'reckless indifference' to a racially hostile workplace" that included 20 nooses hanging on multiple company properties.[63] A feature in the Atlanta Journal-Constitution dismissively characterized the latter as part of a flock of others filed against other Atlanta-based companies including Lockheed Martin, Home Depot, Waffle House, Coca Cola and Bell South during "lawsuit season."[64] These lawsuits, "while potentially deflating profits and morale at large companies in Atlanta and across the country" insisted that Black workers deserved not only entry to the workplace, but should be "remaining and thriving" in "Corporate America."[65] However, the lawsuits also revealed the reproduction of difference that extended past the long civil rights era in the "*New* New South" where company profit continues to rely on the devaluation of labor.

Georgia Power Vice President, Jim Davis expressed that the City of Atlanta had grown more complex under Mayor Jackson and that since his term "nobody speaks for whole groups, black or white, and that has changed the atmosphere," particularly as

employees sought to move beyond simple representation in the workplace and secure fair treatment.[66] Nonetheless, Davis, who had been hired following the 1968 lawsuit to lead efforts in human resources to integrate the Company expressed disappointment that employees sought to litigate their complaints rather than use the channels provided by the utility. He explained, "I thought we were moving into the new millennium with the proper checks in place. I was surprised by the suit, yes, surprised and disappointed,"[67] that despite some efforts, Black workers continued to experience what one litigant named an unchanged culture of the "good ol' boy network."[68] In an internal review of their hiring and promotion records revealed through the lawsuit, Southern Company found that Black workers were more often fired and less often promoted. Patricia Harris, one of the seven defendants and a market research analyst who quit her position with Georgia Power in frustration that she was less valued than her co-workers with less experience, explained her reaction to the employment data, which confirmed her experience was systemic. She said, "I just felt stripped. I felt worse. I had worked very hard for the company, and I'd represented the company wherever I went. I'd always come back to my hometown during career days, and talk it up…. I did a good job for Southern Co."[69] Following the Company's mantra of being a "a citizen wherever we serve," Harris had represented the Company throughout Georgia only to realize that she and other Black workers were underpaid and faced different experiences of racism at the workplace from harassment and violence to dismissal. She was asked to be representatives of the Company in Georgia's racially diverse communities and to help build the Company's public image. However, when seven workers said that the utility was not doing enough, one worker was fired, their suit was dismissed in court, and they were not able to see the

changes implemented within Georgia Power that their concerns and action helped generate.[70] Their labor for the Company was not valued while the measures they called for became a recruiting and advertising pitch. At the stockholders meeting I attended in 2019, the Company proudly announced the award it had won as a "top company for diversity and inclusion."[71] The Southern Company's Corporate Responsibility Report that includes general information on diversity across the company points to the growing racial and gender diversity of new hires, although overall, in 2018, 25% of its workforce were women, including 23% of management; and 27% are minorities, including 20% of management.[72]

The archive illustrates the way the utility and union have reproduced racial, gender, and class difference, and Black workers within and outside of Georgia Power have fought to improve the conditions of labor at the Company. Marable harshly critiques the organization of the utility to support "the regional white middle and ruling class,"[73] which extends through not only through hiring practices at the Company, but also through the political cooperation of the union and state to expand costly sources of power production that reproduce uneven energy burden in Atlanta. I turn now to the most controversial of these projects, Plant Vogtle.

Plant Vogtle

In the late 1960s when the first lawsuit concerning racial discrimination was filed against Georgia Power, the financial model of the company based on constant construction was also in jeopardy. Between 1940 and 1970, the real price of electricity in Georgia had declined 71% due to improvements in generating technology.[74] Utilities

operated under what Richard Hirsh terms the "grow and build" strategy whereby power service improved, prices declined, and earnings for utilities, which were able to add the capitalization of all new construction to the rate base that would be paid off slowly over time, also increased.[75] The utility built more than any other single company in Georgia, spending $368 million for construction in 1970 alone, exceeding all other industrial construction in the state by $175 million, "[a]nd the big jobs have always gone to contractors using union labor."[76] The ideology of growth married to the New South notion of progress was popular with company managers, regulators, customers, and workers. In the 1970s, the limits of technological improvements, inflation, and the energy crisis that increased fuel costs challenged this model as utilities were increasingly hard-pressed to finance new construction that the company argued was necessary to meet growing demand for electricity, but was also central to the financial profit model.[77] Georgia Power sought to cut costs in any way possible, including hiring a non-union contractor to build a new $750 million coal-fired power plant southwest of Atlanta.

The report from the Atlanta IBEW Local 613 to the IBEW Journal noted that it was working "to convince the power company that union labor can do a better job."[78] The issue at stake was not so much the work on one plant going to a non-union firm, but the breakdown of the traditional model of cooperation between the utility and the union as the utility planned more than $2 billion in investment. The Atlanta union officers reported in the IBEW Journal that:

> There are times when this correspondent becomes as confused as a blind man in a dark room chasing a black cat that may not be there. The Georgia Power Company, a part of the Southern Companies, supplies electricity to most of

> Georgia. IBEW Local 84, Atlanta, is the bargaining agent for most of the employees. IBEW Local 84, Atlanta represents the employees of contract line construction doing business with the company, and several inside IBEW locals are employed on inside construction, the large majority of which is generating plants, on power company property.… But what happens now? The Georgia Power Company has, so far this year, contracted—with non-union construction firms—200 miles of high-voltage transmission lines, some warehousing and office facilities, and a huge multi-million-dollar generating station. How long can such a dual operation be endured?[79]

The rhetorical question posed by the union foreshadows the possibility of the slow breakdown of utility recognition and bargaining with the union. In response to Georgia Power's non-union contract, building trades members walked out on wildcat strikes across the state, picketing construction sites, burying two company officials in effigy, and dynamiting and shooting electrical substations.[80]

In an action that labor leaders across Atlanta insisted was unrelated, the Atlanta Labor Council also protested a rate hike proposed by the utility to cover the new construction. Atlanta Labor Council President John Wright protested that working people do not approve of the utility "using a whole lot of our public money here in Georgia" for advertising and charitable contributions because "we don't need Georgia Power Company or any other company to collect our money and dole it out for us."[81] In opposition to the economic model built around low wage labor and corporate control that the Company promoted, workers from unions across industries in Atlanta organized to protest the ways in which the utility extracts value from working people and show that

the public interest did not support the palliative of corporate benevolence to community and faith groups.[82] The Labor Council petitioned to intervene in the rate case and mobilized union members across the city to speak out at hearings in front of the Public Service Commission, as did other community-based organizing efforts including the Georgia Power Project with the goal to municipalize power production for the City.[83] When the Public Service Commission approved the rate hikes, the Atlanta Labor Council, the Georgia Power Project, and eighteen industrial customers unsuccessfully attempted to challenge the increases in court.[84]

The Company adopted a position advanced by the Nixon Administration and taken by many other executives to blame rising inflation on the high wages of construction unions and further targeting the union as the source of racial discrimination, citing that the non-union contractor would increase the share of Black workers employed from 5% to 15%. An expose from the Institute for Southern Studies published in the radical newspaper, the Great Speckled Bird, observed that "this does not mean that the unions have not been racist themselves. They have been among the most discriminatory in the state and nation… these craft unions have not tried to organize the unorganized construction workers to gain bargaining strength though control of the total labor supply in the field," but rather operate based on exclusion from apprenticeships and union halls.[85] Institute for Southern Studies writer Bob Hall offered a nuanced analysis of the IBEW facing an order to desegregate from federal court, quoting a former union lawyer who said "'They're one of the most exclusive groups going. They've made it, and they're not about to let others, like Black [worker]s in. There are better things to support than their strike,'" yet, the publication also militated for workers' right to organize, noting that

"if Georgia Power really cared about getting Black [workers] good jobs, they could launch a massive program to hire Black [workers] in all levels of the company" and design "an 'affirmative action' plan."[86] These are actions that the court would soon mandate.

The utility and the union made up their differences with regard to the union contract after Georgia Power secured funding to continue some of the construction it had planned.[87] In 1974, an IBEW local in Savannah negotiated a collective bargaining agreement with Georgia Power on their initial $2.6 billion nuclear power station in Burke County that would create ten years of work.[88] After years of antagonism and opposition between the union and the utility, at the 1975 regional IBEW meeting of locals in the southeast and Caribbean, the Georgia Power Company President Bill Scherer "commended the IBEW for the position it had taken regarding the recent request of the Georgia Power Company for a rate increase and stated it was in the mutual interest of the IBEW, the Georgia Power Company, and the community that the IBEW continue to operate with a sound private enterprise, investor-owned utility company, which could better serve the public."[89] Scherer sought to maintain the partnership of the IBEW against calls for municipalization from the Georgia Power Project and opposition from other labor unions represented by the Atlanta Labor Council who sued the utility two years prior about electricity rate increases. Georgia Correspondent for IBEW Local 613 in Atlanta opined that even though his local was not employed in powerhouse and energy-related construction, he was grateful for the work others had because without the energy sector, unemployment of building trades construction workers might exceed 50%.[90] Seemingly, the partnership between the utility and union was revived.[91]

Within and outside Atlanta, the IBEW have lent their support to the utility on controversial issues including rate increases and the expansion of the Plant Vogtle in Burke County to build two new reactors that were announced in 2005 and were supposed to come online in 2016. The project is years behind schedule and billions of dollars over budget. Controversially, Georgia Power customers are paying for the project anyway – in contrast to the traditional "grow and build" model that only paid for operational power plants – through construction work in progress charges for nuclear construction cost recovery on their monthly electric bills.[92]

Plant Vogtle is a point of contestation for environmental and environmental justice advocates given the enormous cost overruns, mismanagement, concerns of water use, and the risks for environmental and occupational health along the nuclear fuel supply line.[93] There has not been independent environmental monitoring at Vogtle since 2002, but now eighteen-year-old data shows it is a highly contaminated site that risks environmental and reproductive health as pregnant women are particularly susceptible to radiation poisoning. The plant sits across from the Savanah River Site where the U.S. manufactures nuclear weapons, so, explained Becky from Georgia Women for a New Direction, "there's multiple environmental insults and you have to be looking at them in a package instead of everyone's allowed to put five milliliters of contaminants into the water."[94] Georgia Women for a New Direction is an energy and environmental justice organization based in Atlanta that began to work with communities living near the Burke County construction site where Plant Vogtle means "basically people having to choose between their job and their health."[95] Focusing on the connections made through the electrical grid that join Georgia Power customers in Atlanta paying the nuclear cost

construction recovery charges and the people working in and living under the power plant, energy justice advocates developed a nuclear harm reduction framework meant to restore environmental monitoring, create alternative jobs pathways, and work toward energy equity. For Becky this means, “let's share the burden and let's share the benefits of the stuff and right now too many people are having the burden and too few people are really reaping the benefits.”[96]

Southern Company has recently billed Plant Vogtle as a way to reach its low- to no-carbon commitment. For the Company, clean energy has meant the expansion of Plant Vogtle, and for the union, Plant Vogtle has meant jobs. Hugh, the energy consultant, explained that the political logic used to support the expansion of Plant Vogtle has changed as solar became less expensive, construction costs on the project ballooned, and energy efficiency improvements meant that overall demand for power in Georgia has flatlined. Where it was once about meeting power demand, “Now, it's all about jobs. That this is the largest construction project in Georgia, 6,000 jobs….and [the] economic engine of Southeast Georgia.” The Company often cites that Plant Vogtle is the biggest construction project in the county, which employs many specialized and high wage building trades workers.

The political choices of organized labor to support the utility and statewide candidates that will continue to authorize Georgia Power’s expensive and dangerous Plant Vogtle weds the union to the grow-and-build model of constant construction. However, Hugh continued, noting that for individuals in the solar industry, the focus on jobs at Plant Vogtle “only heightened the kind of the pressure that we felt to really focus on the job-creating elements of investment in alternative energy resources, namely solar,

wind, and to a lesser extent other advanced technologies via battery storage or even electric vehicle charging infrastructure."[97] These "alternative" energy sources are a source of growing employment and investment for the state where the reproduction of labor under the utility model is beginning to change and may fragment with the introduction of many other stakeholders.

Construction is a volatile industry in which workers may be employed by the same contractor, company, or utility, or work between projects. In either case, union members may face seasonal unemployment when the weather makes construction difficult or episodic unemployment between projects. Their organizing model has intertwined with that of the utility to support constant construction and ensure constant employment even as nuclear development threatens to exacerbate environmental harms and energy burden for differently affected residents across Georgia.[98] Despite the position taken by the IBEW, I argue that unions remain important as advocates for workers and question how the changing fuel sources may affect workers. Solar installation often relies on temp labor as a result of competition with the utility and other solar firms and is most often without union representation to regularize wages and benefits in the contingent industry. I question who benefits from the changing forms of the reproduction of labor in the energy industry that consolidates the rule of value based on coercion to work without the security that the union strives to provide. In the next section I will discuss these changing labor dynamics that accompany energy transition.

Installer Brotherhood

Over the last fifteen years, the solar industry in Georgia has grown from mostly mom-and-pop residential solar installation firms to nearly 196 companies engaged in manufacturing, installation, production, and design, who employ nearly 5,000 people.[99] Since the 2013 Integrated Resource Plan hearings when the Public Service Commission first mandated Georgia Power include solar in their fuel mix, more than 2.4 gigawatts of solar generation capacity have been installed and the state Public Service Commission mandated an additional 2.2 gigawatts in 2019.[100] Edward, a retired solar developer proudly talked me through the evolution of his company from 2007 to the present where solar is "now more than hydro-electric production, and soon to be more than nuclear production"[101] in the state's energy supply. The majority of this is at the utility scale and is sold directly to Georgia Power or electric membership cooperatives (EMCs). The remaining 3% is in distributed generation solar dispersed on the land and rooftops of homes and businesses.[102] Solar energy still provides only 1.74% of the state's electricity but is growing in importance to the state electric supply and utility.[103] However, the solar energy industry has emerged adjacent to the utility and while many contractors sell energy to Georgia Power, Joe, a solar installer based in Atlanta, explained that solar is simultaneously a new industry and a transformation of the existing electricity sector

> It's called alternative energy for a reason. You know, it's a new option, which has its own set of unique character traits. And the infrastructure has to change in the grid to take on new solar… the grid hasn't changed much in in 120 years. It really got its design from Nikola Tesla in inventing alternating current and three-phase power generation… I mean, even back then, you're using a steam or hydro turbine

> of some sort to turn a magnet and to generate electrons. And so yeah, I think we're well overdue for an upgrade. And solar's definitely a new industry, but hopefully, it'll kind of revolutionize today's or modernize today's grid, combined with storage.[104]

In Chapter Four, I examined how the materiality of electricity facilitated around-the-clock production. Solar energy, which has a production peak in the late afternoon changes the temporalities that define the commodification of electricity. Joe explained that "mass solar penetration is running into a wall with today's infrastructure," which is unable to usefully direct all of the energy produced at peak production times. Instead, as I examine in greater detail in Chapter Seven, "time of use" rates price electricity based on consumer demand and production cost variance throughout the day. Energy storage is a way to ensure the continuities of continual production that conventional fuels offer.

Changes in fuel source disrupt the existing model of reproducing labor within the Georgia Power workforce without necessarily addressing the reproduction of racial, gender, and class difference that emerges through the utility. Roy, an energy consultant who designs and helps to market residential energy systems in Georgia identified that solar does have the potential to disrupt and fundamentally transform the utility model, but it will require "decoupling ourselves from the past and embracing what's available to us now. They say large ships turn very slowly, and so, we have very entrenched industries, hundred-year old industries that are based on old older technologies that, you know, it's going to take some time."[105] In the meantime, residential and commercial solar installations are only available to homeowners able to put a down payment or pay upfront

for construction. Where homeowners can benefit, access to clean energy and good jobs in clean energy remains uneven.

I interviewed solar developers who focus on both residential scale installation and those involved in larger commercial, and utility scale solar projects. Many do a mix of the various kinds of contracts they can get, but people working at all levels of the growing industry feel constrained by the legislative and regulatory systems in place in Georgia. One former city employee explained that the solar market, and hence employment within the solar industry, is intermittent, seasonal, and uncertain. Changes to the federal Investment Tax Credit that makes solar more attractive for individuals and the lack of state regulation in Georgia to mandate renewable energy implementation mean that it is still a vulnerable industry. Several different installers have shared with her office that they are not making any money.[106] Shawn pointed out that changing the "regulations could definitely [help]... just more incentives to create more customers, you know, we just want to work. We don't want to have to chase work all the time."[107] Several people engaged in advocacy at the state regulatory and legislative levels cited the information produced by the Solar Energy Industry Association, which ranks Georgia 9th for the total amount of solar capacity installed, but 37th, for the total number of solar jobs. Roy noted that "All solar utility scale solar is not a bad thing. Anything to decarbonize the grid is great. But if you're talking in pure economic development and job creation terms, distributed generation does a much better job of distributing the economic development opportunities and the job creation around the state."[108] Further, the preponderance of solar firms in Georgia, which are based in the Atlanta area do not necessarily see the benefits of utility-scale generation. Joe detailed that, "Those jobs typically go to out of

state contractors who come in and hire a lot of temp labor to get them installed. And it doesn't really benefit the economy when you're paying someone you know, very low wages with no benefits."[109]

However, solar developers disagreed on whether the job creation record and potential of the industry helps their case in the regulatory realm in Georgia. Edward explained that economic development and employment arguments are "critical, fundamental" to advancing solar policy in Georgia. He continued, "my motivation in going into solar was to create a successful business to create jobs, economic development, human assistance in rural areas, and then to reduce the environmental impact. So, when I think you tell the whole story, you were able to build consensus and get more people involved and help people understand the true benefits."[110] The only woman working in solar who I spoke with defined job creation as a big tent that pulls in unlikely stakeholders.[111] Evan, another solar installer, insisted it doesn't really matter in the regulatory realm because the Integrated Resource Plan Act that governs regulatory decision-making requires that the Public Service Commission only consider the financial health of the company, taking other concerns into account could leave the Commissioners open to lawsuits if their decisions turned out to be wasteful. Economic development or job growth is thus "this great side benefit, but I don't think it really drives the decision making much, ultimately."[112] During election years, jobs matter, as evidenced in Commissioner Eaton's campaign, but job creation ultimately falls outside the remit of the Commission to secure "safe, reliable, and reasonably priced" services.

Facing this narrow band of decision-making and counter to Georgia Power's boosterism that electricity production and nuclear expansion more specifically create

jobs, Roy argued that "the solar industry, also kind of hasn't done a great job of talking about economic development and environmental [benefits], because they have felt that they had, they didn't need to, that the way to win at the Public Service Commission was just to show that we're the cheapest option out there, that's all we need to do and we need to do it well and we'll win big gains."[113] When the co-benefits of solar do come up, it is often in relation to potential cost savings. Roy continued: "in Georgia, we don't have any natural resources really that we use for generating electricity or fueling our economy.… We import all of our fossil fuels, all of our gas, all of our coal, and all of our petroleum from somewhere else, and we pay about $24 billion dollars annually for that stuff. So, an important argument for me when I go through these issues is [that…] the technology is now available where we can begin to think about using our own resources, the sun to generate our own electricity and create local jobs."[114]

The emphasis on keeping the cost of solar low and competing with Georgia Power on price has meant that the industry is "so pressured to do low pricing" and "to make that return on investment, look attractive for the customer. So, if there w[ere] better policies for solar, then we wouldn't have to stretch ourselves so thin trying to get a favorable ROI."[115] Shawn, who started as an installer and worked his way up to own his own company, observed that the cutthroat nature of the industry often hurts employees who became, "the battering ram for them to get that [installation] done…. you think it's a green industry and everyone's… really good-hearted people that want to help customers and [also] realize their crew's out there in 100-degree weather driving all over the place – it's a really tough job – you think they would appreciate that, but the ones that I work with haven't."[116] The majority of jobs in the solar industry are in construction and the

quality of jobs in the solar industry varies widely as with any construction businesses. Edward explained that on any given jobsite, you have "engineers that are certainly white collar, high paying jobs, but a solar installer that's just doing racking, or solar panel installation is going to make, you know, $15 to $20 an hour. Which is, depending on their skills, may be a good job." The racking and mounting of panels require a lot of labor because each panel has to be torqued by hand, but "It's construction, it's at the end of the day, it's turning wrenches and drills and lifting things."[117]

The geography of utility-scale solar production on rural solar farms means that firms headquartered in Atlanta or out of state who win a bid will often hire temporary workers. For temp workers who are hired to do much of this entry-level installation, contractors have an incentive to minimize training and cut down on labor costs. Shawn pointed out that most of the training is relatively straightforward and the best workers are the people who can show up on time.[118] Training someone to do more complicated wiring, who also has the ability and desire to be on a roof, is a six-week process.[119] For someone who can complete all the wiring correctly and be comfortable climbing up on a roof, "That guy can make $22 an hour,"[120] another Atlanta-based company told me that for work in Macon they paid $25.[121] From Shawn's perspective, there are not that many people who work in solar installation and "our industry is not that booming to generate that many skilled people." Among the skilled installers "we all know each other … the installer brotherhood is already pretty closed loop here."[122] Unlike the IBEW, the "Installer Brotherhood" is more diffuse, the skill level of entry-level workers is lower, and employees do not necessarily receive the same level of compensation or representation through a union to negotiate the value of their time in contingent work.

Within a company, a hierarchy of skilled/unskilled or formal/informal employees might exist "as a general rule… direct employees do have benefits. And the temporary labor people will typically work for a temp labor organization. And the better ones of those would have benefits but you know, in construction, it's a mixed bag. You're going to have employers with good benefits and good policies and you're gonna have companies that try to cut corners and pay the lowest wage."[123] When I asked Joe about paying benefits, he was glad to hear that other companies reported offering health insurance, but lamented that:

> It's hard to do that.... to make enough money to be able to afford taking care of employees better … I've got union guys, and they have a nice benefits package. But as far as being able to put something together for the rest of the company, including myself, I have not been able to afford to do any type of health or welfare fund or retirement plans. So yeah, I don't know. Hopefully, the industry will mature, and we get better policies, and we can start making more money on these jobs.[124]

Outside of Joe's firm, the proclivity to utility scale solar in Georgia does not mean that union contractors are either bidding on or winning contracts. One solar developer expressed disappointment that unions were not trying to get solar work, even when she reached out and tried to hire them. Unlike organized labor in other states that had championed clean energy including North Carolina, Washington, and California where the IBEW declared solar energy construction a "gold rush."[125] She described,

> the unions just didn't think that they had a dog in the fight. And I don't know if that's because their leadership is some of the older generation and they really don't

> understand what this new industry is about? Maybe they're just afraid of change, maybe and they do have a lot of accounts with Georgia Power, so, they feel like that would be crossing the line or something? And I get it, union guys, they're loyal…. So, the unions don't want to get on board with solar because they feel like it would pass Georgia Power, but Georgia Power [is] administering these huge utility scale projects for the IRP [Integrated Resource Plan] …. So, where's the union component in that?[126]

From her perspective, it is not as though the utility is representing the interests of union workers. However, when she tried (unsuccessfully) to hire union members on her company's projects, she felt as though she was not listened to as a woman in the solar industry, asking, "are they ready to talk to me?"[127]

Edward posited that from his perspective, unions are not relevant "with projects the scale of solar projects, collective bargaining is not really something I've ever heard of. In certain states, but not in Georgia."[128] Another investor was dismissive of the fact that when their company met with labor leaders in the IBEW, the union tried to negotiate for prevailing wage.[129] There's only one solar installer in the Atlanta area who works with union labor because he appreciates the training that they offer and has even worked with IBEW Local 613 to build out their apprenticeship facility to include a training lab for solar panels. However, when it comes to his solar business and staffing worksites, "we're splitting up the duties on the job site to have union and non-union help. We want to have electricians doing electrical work, which would be the union guys and then anything non-union or anything non-electrical, you know, we'd like to have a different labor class to try to tackle that. We're hoping that'll be one way we can cut costs."[130]

While all construction work is temporary in nature, the building trades unions have organized to provide security for workers by negotiating contracts for the union to finance health insurance, pensions, disability and worker's compensation, and continued apprenticeship training through construction contracts. This model ensures that despite the contingency of construction work, workers have some security through collective risk-sharing that also provides for retirees and trainees in the absence of a social wage. The increasing reliance on temp labor in the solar industry represents a transformation of the electrical sector workforce that may diminish the bargaining power of union workers employed in fossil fuel and nuclear plant construction and maintenance. The forty employees whose jobs were terminated as a result of the 2019 Integrated Resource Plan that closed the coal-fired Plant Hammond and Plant McIntosh were offered early retirement packages or the opportunity to transfer to Plant Bowen, the second largest generating station in the state.[131] Hugh pointed out that the union and utility have remained quiet on the issue of worker transition, "the impact to the workers currently employed at these at these coal facilities, and then the secondary jobs created by those by those coal facilities many of most of which are located in you know, rural communities without much of an economy."[132] The effects of plant closures for workers or the union should not be diminished, according to Reba, an energy consultant who explained that

> when you ask Southern [Company] about this, they will say, 'Well, they've made the public announcement [about getting to low- or no-carbon energy by 2050]. They're not making more investments; people should be able to figure it out on their own.' I find that to be a very disingenuous place to come from, but their business model [and need to protect] shareholder returns […means] the game

> they're playing doesn't allow them to reveal any more information to support the people employed in these places.

The nature of the regulated utility and the regulating agency would have to change to protect workers. Hugh lamented that:

> there's good reason for labor unions to be skeptical when someone stands in front of them and says, 'Hey, you guys are part of an antiquated, outdated industry. It's time, you know. We need to move on and, we're going to help you with that transition.' It's not that it's impossible to deliver on that promise, I think it absolutely is, but it's hard and it requires particularly in the energy industry in a fully regulated state like Georgia, … it would involve very close coordination between the utility, Georgia Power, and the Public Service Commission, because the utility on its own isn't going to lift a finger unless the Public Service Commission tells it [that] it needs to.

Part of the concern is the obstinacy of organized labor, which is committed to fossil fuel and nuclear energy production as sites that already have union contracts in place. Organized labor aims to reproduce workers to fill the jobs the union has always held,[133] at their core, unions are about protecting and improving jobs for their members. They leverage their power to support nuclear energy expansion, to keep coal plants open and to resist the technological and industrial change to protect the industry in which they have power over their work.[134] The economic decline of Appalachia was a constant referent as to why workers should doubt the possibility of securing anything close to a "just transition" for workers in the move away from fossil fuel energies.[135] Changing the industry in a way that supports and builds worker power has to date seemed outside the

scope of political possibility in Georgia. In the following section, I consider what a "just" transition might mean for the electricity sector in Georgia where the utility, union, state, and solar industry contest alternative visions for reproducing labor relations in the electricity sector into the future.

Transitions

The union is a contradictory site where power relationships based in racial and gender difference are both reproduced and contested. Where I focused here on the IBEW and buildings trades unions who work with Georgia Power, there are many other unions working in Georgia. Some have led organizing of textile and poultry industries that Georgia Power helped recruit to Georgia. Many have been important advocates for workers of color across the South who have organized to win protections at work in the face of employer and state repression.[136] Unions worked with civil rights leaders throughout the long civil rights movement and labor organizing continues to be one of the most effective tools to reverse income inequality, which is higher in Atlanta than any other city in the U.S.[137] In other parts of the U.S., the building trades unions have also fought to organize solar jobs and constructing utility-scale solar plants have created employment for apprentices of color living in communities burdened by environmental injustice. The building trades unions are rife with contradictions and as advocates in Georgia have also supported rate increases, nuclear construction, and remain wedded to their utility despite its exploitative and polluting practices that unevenly effect customers.[138]

The emerging solar industry is also very male and very white. A former city employee blamed it on ability – women are not able to carry solar panels up onto roofs – and interest – maybe Black and Latinx businesspeople were less keen on the industry. In contrast, a Black woman contractor said that someone had once "termed [her] a purple squirrel" because there are so few Black women or other women of color in solar. So far as she knew, neither the utility, nor the Public Service Commission had any measures in place to increase the participation of contractors and suppliers of color through the Integrated Resource Plan. Hugh mentioned that he had only heard diversity come up in reporting that the Public Service Commission requires on Georgia Power's workforce.[139] Programs for targeted hiring and contracting have historically been important in building access to new industry and creating access to capital for small firms to grow. One solar contractor said that becoming certified as a minority business enterprise was key to his company's success because "when it comes to putting in bids for large contracts, that makes us eligible…. We wouldn't have a seat at the Fortune 500 table at this level without them, but now we do. So that helps."[140]

When I asked Edward, a white solar developer, what he thinks it will take to improve racial diversity in the solar field, he answered, "it's gonna take time."[141] His response echoed the New South progressivism that industrial growth will lift all boats and therefore nothing needs to be done to address the unequal starting point. This perspective naturalizes racial inequality and denies the interlocking actions of the utility, union, training programs, and the state that reproduce difference and reinforce a system of racially uneven development. Edward detailed efforts he had been part of to recruit, train, and bring more "disadvantaged" workers from Atlanta and veterans into the solar

field earlier in the conversation. In some ways, as I examine in Chapter Six, these efforts to train and place people in entry-level employment mirrors the model of industrial education that Washington advanced that denies the intersecting operation of class and race that have worked together in Georgia to reproduce jobs that do not provide necessary wages or support systems to survive. The on-going struggle of the long civil rights movement from labor organizing to racial discrimination cases brought by Georgia Power employees and contemporary efforts to address energy burden illustrate that dismantling racialized and gendered labor hierarchies requires a redistributive and reparative politics to begin to address the myriad sites in which power and difference are reproduced. To abolish the value form that operates through and reproduces racial, gender, and class differences under racial capitalism requires more than dismantling fossil fuel infrastructures that have been integral to its expansion.

Clean energy is also imbricated in racial capitalist logics in reproducing contingent labor and unequal accumulation.[142] Roy enthused that with "distributed generation solar, we're seeing an opportunity to, I call it the democratization of energy, basically, where we have an opportunity to change the whole dynamic of how we even think about energy. It's an opportunity for anybody who has property. I guess that's the one barrier you have to have property."[143] Distributed solar democratizes energy production for those with a roof to put it on and access to capital to finance an energy system. Roy has led organizing in Georgia to allow community solar programs that would also allow renters to participate in distributed generation, but the utility and Public Service Commission have opposed these efforts. Energy democracy requires local organizing attentive to and in relation with the demands that people want for their

communities. Roy's work, among many others in Atlanta, illustrates that people do want solar, but to democratize it across communities demands working in solidarity with housing advocates, unions, faith groups, and environmental organizations to change the models through which benefits accrue only to homeowners.

During my research and outreach to labor and community-based organizations in Georgia, I started to talk less about unionization and more about creating jobs that pay what one Jobs with Justice organizer termed, "a reproductive justice living wage," enough to support a parent and two children in metro Atlanta.[144] A former union researcher sympathized with that, explaining that he had left to work in a different arm of workforce development because "the union situation is tough here in Georgia, no doubt about it."[145] However, Neil, my collaborator from the Sierra Club with whom I did much of the work that informed this research, relentlessly insisted on the need to organize workers because the benefits of a union go beyond wages in giving people a voice at work, a grievance procedure to deal with their boss, and a feeling of control over their time.[146] Unions are an important form of political activism in the South through which people can demand the full value of their time, refusing to wait for capital to act. In a city built on devalued labor, labor organizing is a powerful tool to name the systems of exploitation that extract value from the waged and unwaged work of people. Labor organizing in Atlanta endeavors to disrupt the social reproduction of labor that devalues women and workers of color to protect working people and to challenge the urban regime by demanding a social wage that affords all the means to lead healthy and dignified lives.

CHAPTER 6

TRAINING FOR GREEN JOBS

This chapter examines the training program as it responds to technological change powered through electrification within the constellation of social reproductive sources that unevenly values the time of workers and reproduces difference. While the state Public Service Commission does not see either job creation or training as part of its narrow mandate to secure "safe, reliable, and reasonably priced" utilities for Georgians, predating the long civil rights movement and extending through it with demands to desegregate the military, trade unions, and public employment, job training has been a central focus of increasing economic mobility for workers of color. I focus on organizing for "green jobs" that emerged at the intersection of energy and labor politics to contextualize the shortcomings of recent training initiatives within the longer history of workforce training programs that serve to mitigate unemployment generated through energy-intensive racial capitalism. I argue that "green jobs" programs in Atlanta that emphasized job training divorced from job placement became a site that reproduces the devaluation of worker's time. Training is meant to provide necessary skills for people to secure employment and to move along a career pathway with opportunities for advancement and pay increases tied to acquisition of skill and experience. The credentials someone might need to get a job are enormously diverse from a college degree, to a five-year apprenticeship, or a four-week job readiness crash course among countless other educational pathways.[1] Writing in the 1970s, Braverman critiqued the increasing

educational requirements to access jobs, which he contends were not about the intellectual development of individuals, but rather helped the state manage unemployment as automation and computerization substituted energy-intensive machines for labor.[2] This tendency toward capital substitution has also contributed to the polarization of the workforce with education as an increasingly uncertain pathway to employment that pays a living wage. Here, I focus on training programs for blue collar work in construction and manufacturing in the energy sector based on a case study of green jobs programs that proliferated in the late 2000s. I argue that training serves to reproduce workers for the benefit of employers and is inadequate to mitigate the polarization of the workforce.

In 2019, I visited Atlanta Builders one of the "bootcamp" style training programs that prepares workers over four weeks of intensive classes. Atlanta Builders[3] is one of the largest construction training providers in Atlanta and I was curious to see if they had been approached by solar installers and energy efficiency contractors or had engaged at all in planning for the 100% clean energy plan in Atlanta given that it projected the creation of 8,000 jobs. The program is housed in a community center with a daycare on the ground floor where numerous non-profits and service providers also have offices. Heather gave me a brief tour of the facility and asked if I wanted to meet the current cohort of trainees. We walked down the hall to a classroom where more than a dozen men and women in matching shirts – all African American in their 20s and 30s – were sitting. She introduced me to the class and to the instructor, a middle-aged white man, who was pulling up a presentation on the projector to talk about the job fair the next day. One woman asked if we had any tips for the interview process. Heather reminded her of a few lessons shared

earlier in the week and urged her to be herself. We wished everyone luck, and for the next hour, I talked through the genesis of the program with Heather and Nina, the office manager who had been through the training and worked in construction before coming back as an administrator.

The program was started by contractors who were struggling to find reliable workers. There is a heavy emphasis on timeliness to discipline participants to the workday. Lessons go over tools and OSHA safety protocols to prepare workers for a jobsite. Heather emphasized that its's "not just a training it's just not, 'go find 'em and put 'em in the class, give 'em a certificate, let 'em get out the door.' We're not offering certificates. We're offering credentials." Atlanta Builders recruits from churches, community groups, and meets with people who are finishing their sentences at the Metro Reentry facility. All participants must meet certain income eligibility criteria that allows the program to connect them to social reproductive services, such as helping participants get a MARTA card, get a driver's license or get it reinstated, and secure access to childcare, food, or other services people need to complete the training successfully and transition to employment. Getting people access to "the wraparound services they need, that's very important," noted Heather, "To make somebody successful, they've got to have that avenue so they're not worrying to death about what their next step is." Atlanta Builders stays in touch with their graduates for at least a year to make sure they have everything needed to stay in work. Their program does not offer a stipend, but the training is free, "you don't have to pay anything but attention," quipped Nina. She said, "I've had people say 'twenty days? how you teach somebody construction in twenty

days?' No, we're not teaching them construction. We're teaching them how to work in the industry and how to advance."[4]

Atlanta Builders helps to prepare participants for the culture of construction, which can be especially difficult for Black people and non-masculine people. These services differentiate Atlanta Builders from a staffing agency, which people in the industry call "rent-a-drunks," explained Heather. Programs participants graduate with skills that contractors say they need and the program works to maintain a good rapport with the contractors and construction companies who hire their graduates. These relationships are part of the reason that the program places nearly 100% of people who complete it into jobs or apprenticeships, including with Georgia Power and the North Georgia Building Trades Unions. Nina left for lunch and Heather walked me back to her office to give me some literature on the different training modules. I asked, "Do you ever work on energy or have any solar contractors hire people from the program?"

"We don't really do the green thing," she answered, sticking the key in the door and opening the office. Heather expressed uncertainty around clean energy, or what green jobs even mean.[5] As Laura, a funder working out of the United Way who had urged me to speak with Heather said: "For a while green jobs was sort of like the flavor of the day." When I explained it was still popular with environmentalists and the city of Atlanta estimated its 100% clean energy plan would create jobs, she continued, "Yeah, workforce people go, phew," shaking her head and letting out a big sigh. "It just doesn't mean anything in our world… give me an SOC [Standard Occupational Classification] code. Because there isn't an SOC code for green job… there's a mismatch in the nomenclature to really understand what that is."[6]

In this dissertation, I have investigated how electrification transforms the systems that contribute to the reproduction of labor. I first examined the construction of the urban electric system operated by the utility, and in the previous chapter on the union, specifically considered the segmentation of the utility workforce along racialized and gendered lines. Efforts to open access to jobs in utilities for workers of color and women have historically focused on providing skills through training.[7] Clean energy means the worksites and skills necessary to build and repair energy systems change, and with them, the mechanisms for reproducing the energy workforce. I focus here on the ways in which training has been deployed in relation to electricity in the context of "green jobs"

I begin with an "etymology" of "green jobs," building on Peck's research on workfare.[8] Through this lens, I consider the transformation of workforce development infrastructure and federal employment policy involved in the reproduction of labor from the 1970s, when green jobs were first proposed, to the present. I consider the enormous amount of time that people spend looking for, applying, and training for jobs as value-generative labor that reproduces uneven outcomes for workers. Green jobs initiatives that focused on training more than job creation have been widely critiqued for the myopic perspective on labor market development and decarbonization.[9] I examine how "green jobs" programs took form in Atlanta and the subsequent forms of training for solar installation and manufacturing that have evolved. I conclude in reviewing the recommendations offered by city and workforce development officers to grow green employment, which would require pairing training with public investment in clean energy to create sustainable career pathways for workers.

This critique of training is not to dismiss its importance. Countless historical and on-going job training initiatives in the U.S. have strived to abolish discrimination in and unequal access to educational and job opportunities.[10] The document you are reading is the culmination of a nine-year training pathway for me to be a professor of geography. Training is part of all work, but inadequate as a labor policy to address the uneven reproduction of labor, unemployment, and the polarization of the labor force that electricity abets under racial capitalism. I examine these contradictions through a specific focus on the electricity sector and efforts to expand access to energy employment through "green jobs."

An Etymology of Green Jobs

The notion of "green jobs" first emerged from the particular conjuncture of civil rights activism, growing environmentalism, and the 1973 energy crisis and subsequent recession. It was first proposed in 1975, when Senator Hubert Humphrey took the Joint Economic Committee of the 94th Congress on the road to hold hearings in Atlanta, Boston, Chicago, Fall River, Massachusetts, and Los Angeles for labor leaders, community organizations, and city officials to comment on how the recession affected everyday life and devise recommendations that could aid people who were struggling to find work.[11] At the Los Angeles hearing on "Jobs and Prices in the West Coast Region," Derek Shearer, co-director of the California Public Policy Center, argued that the "protection and renewal of the urban and rural environment can be a source of millions of jobs"[12] and put into the record a series of reports calling for a "green collar revolution," authored by Patrick Heffernan, a University of California, Berkeley researcher and later

affiliate with the Berkeley Ecology Center. Greening the economy and cleaning up the legacies of industrial pollution could employ "unemployed and welfare men and women" in predominately urban areas while creating fulfilling careers with adequate wages to meet people's needs.[13] This first mention of green collar jobs took inspiration from the New Deal which "put people directly to work, cleaning up and fixing the environment, building trails in national parks" and the massive investment in wastewater treatment facilities following the Clean Water Act.[14] Heffernan imagined the state and industry could similarly partner on investment to build more sustainable cities.[15] Green collar employment was only one example of public programming needed to address the dual structure of the labor market that "segregated minorities and women into certain kinds of dead-end jobs." Ending the bifurcation of the labor market, argued Shearer, demanded "substantially alter[ing] the structure of the labor market" through full employment.[16]

During the Atlanta hearing, Mayor Maynard Jackson bemoaned the unemployment rate that had risen from 1.7% in 1971 to nearly 12.5% and 15.3% for Black workers in 1975, at which point 20% of people in the city were being paid through federal programs, but public employment was not doing enough to offset the problem. He also urged a full employment strategy, greater funding for cities, and a permanent extension of the Comprehensive Employment and Training Act to provide both vocational training and permanent jobs. He concluded in saying that, "I tell you now my number one frustration as mayor is to see people not begging for welfare, although they need it; not begging for food, although they are hungry; not begging for money, although they 'are broke; but begging for a job." [17] He opined, job creation could not be managed in the city alone and demanded congressional support. Clark College President Vivian

Henderson also pointed to unemployment and the possibility of green jobs in water infrastructure as a way that Black youth had gained employment through community and labor union organizing to pressure the Army Corps of Engineers to implement local hiring goals for rural development projects in the South. He sought to elevate this as an example, but similarly pointed to the need to integrate economic development and employment policy that also ensures equal opportunity "for all races, minorities, and sexes."[18]

In an interview in June 2019, Shearer explained that job creation policy in the 1970s built support across racial lines, "it doesn't matter what color you are, you need a good job, you need affordable housing, you need health care. And so that should be the glue - the economic interest…. the thinking would seem to me, it's pretty common sense, politically."[19] The proposal for a green-collar revolution and his later advocacy of a Green New Deal under the Regan Administration, were ways to keep together the New Deal coalition of labor unions and people of color, who continued to back the Democratic Party.[20] This coalition in combination with environmentalists could ideally unite around the commonsense notion of addressing jobs and the environment together. Although, noticeably absent from Shearer's description of this potential alliance were the Southern Democrats whose support was necessary to the Congressional adoption of the New Deal.[21] When I asked why he thought green Keynesian policies had not been taken up, he contended that the roll back of war on poverty programs that began with the Reagan counter revolution changed a lot. "And," Shearer continued, "starting with Nixon they had a southern strategy to use race as a political weapon… to turn the South Republican…. That right-wing resurgence [prevented] doing a lot of these things."[22]

Part of the right-wing resurgence was the dismantling of federal employment policy that offered public jobs, embedded in the Comprehensive Employment and Training Act of 1973, which enabled federal job creation alongside education, training, and other services necessary to the reproduction of labor that Mayor Jackson explained as central to weathering the recession in Atlanta.[23] Following emergency measures to create jobs during the recession that emerged from the energy crisis, Congress began to restrict public employment to only the most hard-to-employ disadvantaged workers and welfare recipients.[24] Simultaneous efforts to adopt labor law reform to organize workers in the South in the wake of the Civil Rights Movement and pass the Humphrey-Hawkins bill that would have established a job guarantee to make the federal government the employer of last resort, were stripped down under the Carter Administration. "The attempts to revive postwar liberalism became the New Deal that never happened," mourns Jefferson Cowie, it ended as "something closer to a requiem for a collective economic vision for the American people."[25] Where the Comprehensive Employment and Training Act had employed nearly 750,000 adults and created a million summer jobs for teenagers in 1978, by 1982, the summer employment program was halved, adult employment eliminated, and the policy framework replaced by the Job Training Partnership Act that eviscerated public employment. President Reagan justified this move to "short-term training for the poor and unemployed…by insisting that there already were enough jobs for those prepared to take them."[26] Training became the primary jobs program, under the assumption that the inadequacies of workers, rather than the labor market, cause unemployment.[27]

The training emphasis in federal employment policy emerged in the post-war era with the effort to convert the workforce from wartime production.[28] Electricity became intimately intertwined in this history as a necessary energy source to labor that fuels capital mobility and the tendency of capital to replace workers with machines through automation and computerization, which both eliminate jobs and create new labor demands. Training prioritized distinct populations of workers, those dislocated from employment as a result of trade or automation, youth, and "disadvantaged" workers, yet distinct programs available to individuals from different backgrounds often reinforced a racialized and gendered division of labor.[29] Over time, Margaret Weir observes that a relatively ineffective employment policy of "fragmented, narrow, constituency-targeted training programs" became "the American approach to unemployment" given "both political and economic constraints."[30] The program was updated in 1998 and again in 2014 as the Workforce Innovation and Opportunity Act, which created one-stop Job Centers "to help businesses find qualified workers and help job seekers obtain employment and training services to enhance their careers" in "high-demand" fields.[31] Jerry, a deputy commissioner of the Technical College System of Georgia, explained that for students who are eligible for Workforce Innovation and Opportunity Act funding based on their income, "we'll help you with the tuition [for training or technical college], we'll help you with any of the costs and if you have children, help with childcare while you're in school. It's kind of a blanket to help people get off of welfare or never get on welfare. That's really the way you can look at it. So, I joke that this is one of the few federal programs that all the political spectrums are okay with. You know what I mean? I mean, nobody argues with this stuff."[32] Training programs are a politically neutral way to

manage the low-wage labor markets, taking people out of work when there are not sufficient jobs available and offering lessons in "high-demand" careers tailored to employer needs. Most training programs are not paid but are a still a form of labor that takes time from people (and creates new demands for social workers, teachers, and administrators to keep participants up to date in new technologies).[33]

Lafer concludes that discipline to the temporalities of waged work are a primary object of training given that there is little evidence that a more highly trained workforce would ensure either more jobs or higher wages. He expertly diagnoses the contradictions that emerge with the emphasis on job training through a survey of private employers, which found that

> By far the most common complaint of employers focuses not on any traditionally defined skill at all, but rather on workers' discipline, punctuality, loyalty and 'work ethic.' However, it is unclear that punctuality and discipline can accurately be termed 'skills': they may constitute acquired habits, but they are also in large part commitments which one chooses to offer or withhold on the basis of the wages and conditions provided. To the extent that employers are simply paying too little to get the work commitment they desire, this is a mismatch of a different sort.[34]

In this sense, as Gramsci observes, the reproduction of labor like, "every relationship of 'hegemony' is necessarily an educational relationship."[35] Training – perhaps more transparently than public education – employs state resources to direct participants to employment and to discipline people as workers. In the time expended to reproduce

themselves as workers, participants perform value-generating labor on their way to paid employment in which they will be workers and taxpayers too.

Participation in training is often coerced to satisfy workfare, probation, or parole requirements which compel individuals to take low-wage jobs.[36] The downward pressure workfare puts on wages means that even with credentials earned through training programs, people are not necessarily able to move into jobs that pay a living wage. The perverse incentives of public assistance frustrate Laura who described that as the salary of someone goes up,

> public assistance doesn't go down proportionally. It stays with them until they're no longer eligible, and then it's gone, so if you look at the effective wage rate, which is what they're earning as well as the assistance, … they can end up so much worse than they ever were….you will have individuals who will turn down raises or promotions, because effectively they're going to earn less and you can't blame them for that because they're barely making ends meet. The other issue is that even with middle skill jobs that are supposedly paying a sustainable wage…once that assistance is gone that individual is pretty much back down at the poverty level. We're all trying to move nursing assistants up to medical assistants and patient care techs because we think those are better jobs and they are in the hourly rate, but they're still not going to get someone to a sustainable wage job because as soon as they lose their assistance, they're back down at the low wages.[37]

Dana-Ain Davis analyzes the intersections of racial, gender, and class formation through training programs in her research with residents of a domestic violence shelter. She

observed that Black women "were guided toward training programs incongruent with their personal interests. They were discouraged from pursuing higher education, and coerced into low-paying service work, mostly as day care workers, home health aides, and cashiers, positions historically held by Black women."[38] The training infrastructure facilitates job placement with private employers and "short term or vocational training," which serves to pigeonholes Black women within a racist labor market and represents "an ideological continuity about what some poor Black women should be taught to do."[39] Workfare mandates that recipients of public benefits either work or be enrolled in job training,[40] limiting social reproductive services to those engaged in activities that reproduce the value form as workers or in preparation to work. These services create a pool of potential employees who are rarely given the opportunity to pursue higher education and often directed to work in low wage jobs that reproduce racial and gender difference in the division of labor.

The revival of "green jobs" sought to take the evisceration of public employment and welfare head on. In California, the push for public jobs had been sustained in green employment with the state-level California Conservation Corps and rise of the nascent solar energy industry in the late 1970s supported through public policy and backed by research that touted the impressive potential gain of "Jobs from the Sun."[41] Outside of scattered mentions of the growing 'green' employment trend in conservation and environmental fields,[42] green jobs largely faded from newspaper coverage during the first Bush administration with the notable exception of Al Gore's insistence on the campaign trail that there were "Millions of green jobs to be created." President Bill Clinton affirmed this opportunity in his Presidential Earth Day address in 1993.[43] The following

year, he signed the Executive Order 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which resulted from years of activism from Black, Indigenous, and Latinx communities across the U.S.[44]

Environmental justice leaders, including Robert Bullard in *Dumping in Dixie*, had made the case that environmental justice is a labor issue because polluters often use "jobs blackmail," forcing Black workers who are already constrained to "low-paying, low-skill, high-risk blue collar and service occupations" to take positions that they know are bad for their health because it is the only form of local economic development.[45] The environmental justice movement named racial and economic justice as twinned issues that "environmentalists and preservationists" had failed to see or act on.[46] The effort to create jobs and address environmental injustice became more tightly intertwined through public initiatives focused on the employment opportunities in environmental remediation,[47] which ensured that at minimum, those who had faced the slow violence of environmental pollution would receive employment opportunities such as public programs for lead remediation in Atlanta.[48]

Building on these initiatives, Van Jones launched the "Green Jobs, Not Jails" campaign in 2004, as part of the Ella Baker Center for Human Rights in Oakland, California.[49] This was later expanded through Green for All, which worked in select cities across the U.S., including Atlanta.[50] In an interview published in *Antipode* in 2009, Jones fended off criticism that the program accommodated green capitalist visions, arguing instead that green jobs strategically harness a market-based approach to shift the hegemony of fossil-fueled racial capitalism. He explained: "My program is Green Jobs Not Jails, because it addresses the two worst aspects of the present US reality: we have

throw-away people, throw-away neighborhoods, throw-away children, thrown into prison, and we also act as if we have a throw-away planet. The answer to both the social and the ecological crisis is somewhere in the direction of less ecologically devastating forms of economic life."[51] Jones envisions a counter-hegemonic labor regime that would employ Black and Latinx workers in "family-supporting, career-track, vocational, or trade-level employment in environmentally-friendly fields."[52] The green jobs campaign offered an organizing framework to address the "dual crises" of climate change and racialized and gendered income inequality that threaten the reproduction of everyday life. Professing that both "the welfare state and the warfare state are exhausted ideas in U.S. politics," people joining together with government could build a "new political center of gravity… to create ecologically responsible jobs."[53] Training would be part of suite of programs to create career pathways in clean energy.

Jones's work in Oakland emerged in conversation with labor leaders who were already engaged in political negotiations with the utility and state about the future of jobs in electricity.[54] For instance, the Apollo Alliance, which was founded in 2004, asserted a platform for job growth in "green" industries as central to a "clean energy, good jobs" economy during the 2008 recession.[55] Prominent think tanks articulated policy and political platforms to challenge the training focus of federal employment policy and push for job creation measures in low-carbon energy and green infrastructure.[56] Unions and environmental and environmental justice organizations encouraged job creation in the renewable energy sector to address climate change, create construction jobs that could not be outsourced, and leverage public policy to ensure that jobs that paid "family-supporting wages and benefits."[57] These initiatives were most successful when negotiated

with state and utility partners to secure investment in both "supply-side" measures to train workers and "demand-side" initiatives to use public policy to ensure demand for those workers on clean energy projects.[58]

This organizing brought together civil rights groups and organized labor, energizing the traditional Democratic base. These synergies likely contributed to green jobs prominent role in the stimulus measures adopted during the financial crisis.[59] Within a month of coming into office, President Obama signed the American Recovery and Reinvestment Act of 2009, or stimulus, which put nearly $8 billion in federal funding toward renewable energy and energy efficiency projects nationwide.[60] He appointed Van Jones as "Green Jobs Czar" to work between federal agencies, cities, community groups, and unions to build pathways to employment through this targeted energy investment.

The stimulus money filtered through a workforce development bureaucracy attuned to job training with a time-limited focus on creating immediate placement opportunities and not sustained job creation. Where successful programs in the Bay Area had required years of coordination with utility, city, labor, and community-based partners to recruit, train, and place workers into paid, on-the-job training, implementation varied enormously by region. Stimulus-funded initiatives became emplaced across the U.S. in distinct forms contingent on local labor law and existing political relationships. These articulations shape the distinct ways in which the transition to clean energy has unfolded since and how workers experience it.[61] A federal government employee working in Atlanta to disburse stimulus funding explained that there was little accountability to the vision of creating career pathways to train and place workers in green jobs. Green was "a little icing on the cake…. But when we report to Congress, we're not reporting green,

we're not reporting workforce, we're reporting 200 jobs, $70 million of private investment, and Congress doesn't care, necessarily what those jobs or private investment is doing…. We're in the public infrastructure business. We're not in, you know, policing companies and how much they pay their employees."[62] Without local pressure on where and how funding is disbursed, federal agencies stuck to their narrow mandates.

The green jobs emphasis initially inspired international calls for a "Green New Deal" to stimulate the global economy and address climate change in the lead up to the Copenhagen Conference of Parties in 2009.[63] The high hopes for the first international summit after eight years of climate change denial from President Bush were dashed when international negotiators were unable to reach a deal.[64] The dreams of green jobs as a way to address inequity reproduced under energy-intensive racial capitalism crumbled soon after. I turn now to the city and non-profit programs to train workers in residential energy efficiency, or weatherization, in Atlanta.

Weatherizing the Recession

Following the 2008 recession, the City of Atlanta put its stimulus funding to use in realizing some of the urban sustainability goals outlined in Chapter Four. Reba, an energy consultant who had worked with the city remembered that the stimulus "gave us the cash to do stuff, like that gave us the money to be able to hire somebody, staff to actually go around and do self-audits on our buildings, for instance, so we were able to develop a prioritized list of the projects that would have the highest return on investment… [T]he ARRA [American Recovery and Reinvestment Act] money came at the right time, to be able to put cash behind our dreams."[65] While the stimulus money

allowed the city to build out various programs identified in Chapter Four, the "green job" growth charted in the city's original sustainability plan was hard to attain.[66] Reba noted,

> That was when the whole term "green jobs" was invented. And it came under Obama, and you have Van Jones representing it. And it was *the* sexy thing to do, right? And Atlanta being a majority minority city, and having some labor union presence, there was a desire by different groups to do something on green jobs, to figure it out. And so, I pulled together the Green Jobs Task Force. And I think it's suffered from things we still see green jobs suffer from today is like, what do you mean? What are you actually going to do, more than just talk about it? And so, we just kind of floundered. [67]

There are a few notable initiatives that got off the ground and continue to shape how environmental advocates consider "green job" potential. The most significant was an effort with the environmental non-profit, Southface, which opened the Southeast Weatherization and Energy Efficiency Training Center during the recession.[68] They trained over 1,200 people to work with community action agencies in weatherization.[69] Southface also worked in conjunction with AmeriCorps and Youth Build to train students in building with sustainable Earthcraft principles and conducting energy efficiency tests on homes for low-income Atlantans.[70] Trey, who coordinated the training program explained that incorporating energy efficiency principles seemed like a natural fit because each Youth Build cohort builds at least one affordable housing unit, which is targeted for sale to low-income, first-time home buyers. The program expanded within the City of Atlanta, which worked over 18 months to train young people to conduct energy efficiency audits, while also introducing them to green career fields. Trey explained that

"it was a great opportunity for the kids," and "we saw a potential market for this work as an opportunity to go out and try to build a program that we could go into the community, especially with elderly [people] and do this [energy efficiency improvement] work and unfortunately, that didn't take off like we thought it was going to."[71] Eventually, Southface also stopped doing weatherization training because they could not place all the graduates into jobs, nor could they effectively build a career pathway for individuals trained in residential energy efficiency.[72] As one Southface employee explained, they are still not that interested in reviving training for green jobs with the 100% clean energy plan because they do not want to "train to unemployment."[73] Trey pointed out that competition from Georgia Power, which had their own program, and new certifications for home energy efficiency emerged over time. It meant that "current contractors were going to this [Southface] training to upskill and then they have a new they have a new product that they can market," but "there was not really a lot of new opportunities to train in this energy efficiency space at least for young people…. where you created a new generation of professional technicians in this space, which was our desire to do…and that didn't happen."[74] Without on-going support from the city or utility to implement energy efficiency, there was not a pathway to employment for the entry-level workers that the stimulus money trained. Several years later, the city donated the equipment it had purchased with the stimulus grant to the only student from the program who was still in that line of work.

The technical colleges also designed training pathways to support clean energy education during the Obama Administration when, Jerry detailed, "there was this big, 'we're going to go solar'… we got with industry and worked with that. A lot of that

industry didn't make it, but some … are still in operation and going strong, and we're still providing them with a workforce."[75] Solar remains what Jerry considers to be an emerging industry that is still contending with "competition, and so it's not expanding quite fast enough…. it's actually a pretty robust industry right now, it's just not the that explosive thing that they thought it was gonna be."[76] Explosive industries are what the training infrastructure is intended to serve. The twenty-two technical colleges across the state offer associates degrees and work directly with industry to develop targeted training programs in areas with a clear growth trajectory. The intent is only to train people in high-demand careers so that people who complete training are likely to find a job at the end. For any new company coming to the state or an employer that is adding a new product and will create at least fifteen jobs, the technical colleges will provide an assessment of exactly what the workforce needs will be, create a training plan, and train their first cohort of employees without a charge to the company. The curriculum is then turned over to the technical colleges so that "we can provide the pipeline… so there's always new graduates coming in[to employment] as people get promoted or transfer."[77] Jerry specified, "it's kind of one of our big secrets in Georgia about how we attract and do such good business for business." This program was available to solar companies during the recession and more recently two of the largest energy projects coming to Georgia for battery manufacturing plants.[78] Jerry joked about my University of Georgia affiliation and explained that at the technical colleges, "we try to keep in touch with business and industry. That's really why we exist. We're not studying the Higgs Boson particles or any other things like that, we're just putting people into the workforce or enabling them to get into the workforce. So, everything we do is based on what industry in the area needs."[79]

The benefits for workers are immediate job placement. Trey described that "the Technical College System of Georgia understands that everybody, first of all, don't have the academic ability to do this credit side [of an associate's degree] and also don't have the time. You need some quick hits, that's going to equip people with industry recognized credentials, that can lead to employment that's paying a living wage."[80] The technical college system provides invaluable service to people who are eligible for Working Innovation and Opportunity Act funding, however, with the changes in the structure of welfare, these social reproductive services are concentrated on individuals trying to move into employment.

Trey offered an example of the ways in which training programs are necessary to cultivate the employees that employers want based on a partnership he had been a part of between the Urban League and Georgia Power that to train lineman. He was excited about it,

> because those are excellent jobs, pays well. Retirement is great. Great company, right? So, what was the challenge there? Well, first of all, they're not that second chance friendly [for people with a criminal record].…[T]hey are no tolerance for smoking, that's tobacco and of course marijuana. And then there were some …educational requirements that folks had to have as well.… I will tell you for about two years, we worked through this process with Georgia Power when I was with the Urban League, and I probably ended up getting maybe two or three people through, right? I mean, we did information sessions where a hundred folks will show up because we said we have a Fortune 500 company who's looking for a lineman, we have a training program and a hundred folks will show up, but then

> we will continue to vet them and then that would narrow down because they didn't meet the requirements, continue to vet them and narrow it down even more.[81]

Despite the challenges on working with Georgia Power, explained Trey, "if you have an employer at the table with you, and they're committed, and they're willing to work with you, I think that is the best approach to developing in this space, without it's not impossible, but it's more challenging."[82]

An employer connection is best for training program success according to each of the people I spoke with. Trey, who had worked in a variety of non-profit and public settings offered several other components that make a training program successful. "Number one, we would have to ensure that folks, young people are educationally equipped to matriculate through the necessary phases of getting the credential… Secondly, we need to make sure that we stay, the technology in this space stays, current as well." So, "you have to front load academics, and then from there, we would have to, again, demonstrate that there is a market for this service, right?"[83] The constant demands of technological change are ever present and have to be considered in making sure that training programs stay up to date with industry to ensure eventual placement for workers.[84]

In part, the training program also remains about disciplining people to the temporalities of the job site to ensure that worker's show up on time and carry out the tasks that they have been asked to do. Heather admitted that staying in a construction job is sometimes just knowing how to look busy, "be busy the whole time. Do not ever be slack, a jobsite, always have something to do, sweep the floor, pick up cigarette butts,

you know, just put your ears on and keep your mouth shut."[85] Trey defined these survival skills as, "soft skills. So, we can train them in a classroom all day long… But if Jana doesn't understand that you got to report to work on time, you got to dress a certain way, you can't do drugs" he paused letting it sink for emphasis. "You know? So, we have to also take time to ensure that level of education is disseminated as well to the participants. So, once you have the participants where they need to be – and sometimes it takes a while – but eventually, they get there."[86] These soft skills return to the questions that Lafer posed, observing that workers withhold timeliness, respect, or do not show up when a job is not offering a living wage. That's the most important part, expressed Trey, he only works to train people for jobs worth staying in, so "would they be compensated in a way that would allow them to live?" In Atlanta, that means $25-28 an hour, enough for a working person in a single-headed household to support a family as the minimum reproductive justice living wage.[87]

Green jobs programs suffered from a lack of definition and demand.[88] Where there was funding to train people, there was no job opportunity at the end and no demand without continued state investment for programs to improve the quality of housing and reduce the energy demands of poor people. Rather, Georgia Power, as seen in Chapter Four, has tried to cut its budget for residential energy efficiency. Laura, the workforce development funder, explained that "there was this *huge* Department of Labor funding … for 'shovel-ready jobs,' and green jobs was the big thing they threw all this money at… I just remember hearing the people in the workforce [development agencies] kind of going, 'Well, that was a big kind of boondoggle,' it's not terribly well thought out and successful." Green jobs are not talked about as much anymore, she observed. "There's

solar installers and then [energy efficiency] retrofitters and all that, but those are those are construction jobs."[89] As solar becomes a specialty construction business, it has started to develop it has own career pathway,[90] but it does not line up with training programs for construction such as Nina and Heather manage and has instead, as seen in Chapter Five, relied where necessary on temp workers.

At the beginning of my fieldwork in 2019, I reached out to a former co-worker and climate and labor policy strategic advisor, Betony Jones, about my proposal to study the infrastructures that train workers for jobs in the energy sector. She questioned my use of the term "green jobs" at all because it might have received enormous attention in the press and environmental movement, but from her perspective "the green jobs framework has emerged in such a parallel way that there isn't the alignment that is needed to best serve workers, nor has the green jobs framework supported broader political alignment around climate/clean energy policy."[91] Green job training did not achieve its counter-hegemonic aim of challenging the social reproduction of the value form under racial capitalism that tracks people into training, which can lead to stable careers in advanced manufacturing or construction, but can also waste people's time or trap them in low-wage labor. However, Betony mused, "what does the epistemology of green jobs say about how effective policies organized around the principle can be, or how can the understanding inform what changes might be necessary to build an inclusive clean energy transition?"[92] In the world of workforce development, the epistemology of green jobs has been thoroughly debunked. While city officers and environmental non-profits in Atlanta still cite "green jobs," it is no longer the "buzzword."[93]

One of the consultants who helped the City of Atlanta Office of Resilience write their 100% clean energy plan explained that "green jobs" were not as much of a priority as household energy burden to the stakeholders they reached out to. It mattered to some, for instance, "when we met with the technical colleges? *Yeah*. They wanted to know what kind of programs should we be offering if you guys get serious about putting money towards this? what sectors of the economy are going to experience a short supply of labor? … A number of the low-income communities were also interested in that. Folks that would regularly make use of Atlanta WorkSource."[94] In other words, he argued that only the underemployed and job trainers were still thinking about the ways in which energy could transform labor. (Notably, the city did not seek union input in its most recent energy plan).

Reba described that in her advocacy work around clean energy, employment and workforce development can still be an important part of justifying policy, but that the "epistemology of green jobs" did damage to subsequent efforts to try and explain clean energy in economic development terms. Of all the ways in which she approaches policy advocacy, jobs are "the hardest one, like, it's a nice to have… but the elected and appointed officials, we work with, kind of think of it as lacking integrity… I don't think people believe the job creation numbers. And so therefore, it's not what we lead with. There w[as] so much talk about that, in the ARRA [American Recovery and Reinvestment Act] years that it was way overblown."[95] Not only did the numbers not pan out, but there were glaring examples where training failed that influence discourse even in Atlanta. People had said, "'we'll retrain those coal miners to install solar panels.' And nobody can point to that actually happening. I think, shows a great naivete on the part of

the green community, that we just think that it's that easy. And don't recognize when coal mine X closes, you are killing a town. It's not that you just need to give that coal miner, retrain him at the local technical college to install solar panels.... we're undermining our own message by not being able to talk robustly about supporting transitions of these economies."[96] The same could be said about "coal plant X," a little closer to home in Georgia.

Turning to the second part of Betony's provocation to interrogate the epistemology of green jobs for what it could have been, the etymology of green jobs offers valuable lessons. Green jobs were a quilting point where different parts of the environmental and climate justice movements joined in coalition with city governments, racial justice organizations, schools, colleges, churches, and businesses. Examining how and what motivated the enthusiasm of various stakeholders might help to design better policy that values the time of potential green workers. At many of the events I attended throughout my research, Black residents raised the possibility of green job creation. A radio MC brought it up at Atlanta's "Rise for Climate, Jobs, and Justice" in September 2018. At the townhall discussed in Chapter Two, green jobs were raised. At each of the three Partnership for Southern Equity Just Energy Circle meetings I attended in which community, environmental, and environmental justice partners discuss energy policy, people asked what the coalition was doing around green jobs. At its core, green jobs help to build a "chain of equivalence,"[97] by bringing together – as Neil, a Sierra Club organizer in Atlanta, frequently argued – two of the most powerful social movements of environmentalism and trade unionism.[98] While the racial and class politics of stakeholders within these movements often differ, underlying Van Jones's original call

for green jobs is a demand to build a different labor politics that acknowledges the value of worker's time. Green jobs programs sought to eliminate the barriers to employment that devalue workers with a criminal record, lack of education, or who are young, Black, or Brown. The focus on green jobs training failed to reverse what Jones terms our "throw away" society in creating meaningful pathways to jobs that pay a living wage in environmental fields. In the following section, I consider this tension in the context of employer-based and community-led training programs that build social reproductive infrastructures that respond to changes in construction work and to recruit, train, and place new workers in emerging energy fields.

Growing the Pie

At the Public Service Commission hearing on Georgia Power's proposed rate increases in November 2019, Costco Jones an energy contractor spoke during the public comments to ask for greater investment in energy efficiency. He explained that people on fixed incomes could not afford an increase in energy bills and if the Commission was considering authorizing the fee increase, it must be paired with meaningful support to help people reduce their energy consumption. He suggested we could "put these weatherization people back to work…that were trained up during the ARRA [American Recovery and Reinvestment] Act" and reach Atlanta's 2035 target for 100% clean energy.[99] He laid out that training was never an adequate employment or energy policy without the necessary funding to ensure continued work that could reach the people who needed it most. While I consider the rate case in greater detail in the next chapter, it is important here to consider the ways in which organizers in Atlanta have leveraged

training in the counter-hegemonic ambition of Van Jones, to value the paid and unpaid work that people put in to get a job.

Training is insufficient to create jobs and in practice often serves to reproduce racial and gender difference through which the rule of value operates in tracking people to different jobs. There is a long history of leveraging public policy to train and hire workers of color under-represented in the labor force due to historic discrimination. Innovative organizing within and outside of Georgia built on the history of the long civil rights movement that connects "democratic political mobilization" that began following the New Deal to organizing against Jim Crow to articulate a feminist and anti-racist labor politics.[100] Under the administration of Mayor Jackson, the city attempted to institute sweeping training, hiring, unionization, and procurement efforts to prepare Black workers for careers in public service and ensure those jobs with city paid high wages. While some of these programs, such as the prevailing wage requirements to encourage use of union contractors were voided, others, such as the minority contracting program, have had a profound effect on the city, and influenced budgeting and procurement policies across the U.S. as community-based organizations demanded jobs and community benefits on public works.

A generation later, under Mayor Franklin, the city began construction on one of the largest and most controversial public infrastructure projects, the Atlanta Beltline. Georgia Strategic Alliance for New Directions and Unified Policies (Georgia STAND-UP), which was founded in 2005 as part of the Partnership for Working Families, began to organize for community benefits as the only group working to translate this model for labor-community organizing to the South. Georgia STAND-UP argued that public

investment that threatens to raise property values in working class Black neighborhoods should create living-wage jobs for Atlantans.[101] Their work contributed to the Beltline Equitable Development Plan, which estimated the project would create 30,000 jobs and stated an intent to hire people from neighborhoods through which the Beltline travels and pay prevailing wage.[102] The developers have repeatedly violated these criteria for community benefits, but the campaign laid the groundwork for other partnerships in the city to create good jobs with legally enforceable mandates. A subsequent initiative focused on clean energy through the Emerald Cities Collaborative.

In a forum on green job growth hosted by the Emerald Cities Collaborative in 2011, Deborah Scott from Georgia STAND-UP explained Atlanta to be distinct from other major cities in that local politics are governed by a bi-racial entrepreneurial class:

> thanks to Maynard Jackson, we have a very aggressive minority [contracting] program where we've made a whole class of black millionaires so our [issue] is more of a class thing. So, it's race and class. So, we have Black folks that are doing very, very well, but then we have the haves and the have-nots – if unemployment is 15% in Atlanta, black unemployment is 30%, I mean we people [that] have just fallen off the grid.[103]

The grid here is a metaphor, to describe the labor reserve, who green jobs policies sought to target as a way to direct them back toward being taxpayers and employees doing meaningful work in their own communities, improving neighborhood and public infrastructure at living wages.[104] Georgia STAND-UP worked to bring the building trades unions, the city, and developers together to use stimulus funding for pre-apprenticeship programming and use investment from the building trades pension funds to create jobs in

commercial energy efficiency. The initiative fell apart after a few years but embedded the idea that any clean energy policy should have a paid, on-the-job training component that is community driven toward improving the quality of life for working class people in Atlanta.[105]

Following the conclusion of stimulus-funded programs through Southface, city officials working on energy projects stopped trying to push for job training or measures to improve job quality. One former city employee explained that getting the contract for solar was such a fight. And, the contractor who won the bid from the city to put solar panels on municipal buildings explained the need to keep his work crew lean. She decided it would be best not to put too many conditions in the contract that could increase the cost for what is still a vulnerable industry. Plus, she had a responsibility to city residents to keep costs down.[106] The clean energy contracts did not contain an explicit living wage provision, nor, as a Black CEO of a small solar business explained, despite the mandates that 30% of city contracts go to small businesses or businesses owned by women or people of color, "isn't it interesting that it never really applies to solar? The [Mercedes Benz] stadium? it didn't apply to [either], you know, I'm looking at all these opportunities and I'm thinking, well, I'm small, this is a good opportunity for me. Uhhhhh, no, it didn't apply to solar."[107] The failure of city staff to see clean energy policy as employment policy "is a missed opportunity," identified Trey. Every infrastructure project is a training and job creation opportunity. And, he continued, "I try to always embed this workforce component because ultimately, you want people to be able to embark on a career pathway that's going to support their economic sustainability and

grow."[108] Even when city officials commit to creative efforts to build training and employment opportunities, the programs do not always work.

An airport employee described one example in which the diversity team was "looking to do an 'Airport University,' which would help [with] GEDs and the FAA [Federal Aviation Administration] shut that down because it was a diversion of revenues outside of the airport. So, there was effort to try to do that, but it was definitely shut down."[109] Another Office of Resilience employee explained it requires a lot of creativity to work within the city procurement rules because he is bolden to "lowest responsible bidder," in air quotes. This puts limits on what he is able to do and who he is able to direct city resources to. There are ways to work around the imperative of lowest cost. He offered the example of trying to build a fence in an urban green space. Instead of putting out a request for proposals for building a fence, he might try to contract for an "educational program to build a fence" and a non-profit or neighborhood group could become the lowest price leader while offering employment to young people in the process.[110] Training remains a broad realm in which the reproduction of labor and the reproduction of racial and gender difference through the value form can be challenged even if the allocation of federal funding to create green jobs did not create the industry or career ladder imagined.

In practice, employers often conduct the majority of training.[111] Shawn and Evan, who both started as installers who now work in more managerial position for solar companies, elucidated the application, hiring, and training process for their companies. Georgia does not require a credential to install solar panels. Evan explained that while a requirement for credentials might help his company, "we're right now way more

interested in making the pie bigger, we're not worried about market share."[112] Evan delineated that if an applicant has gone to one of the few solar training programs in that state, "that puts you at the top, top of the hiring list," and "if people can say – if they have roofing experience, or if they can say I went to tech school … for solar or to do electrical work," even better.[113] Shawn, said that for the most part, "we teach them ourselves. Yeah, we just we hire 'em and we train 'em… you never know how good they are until they get out there a day or two. And you can tell [if] they're an all-star, so, who cares if they just got out of prison, or if they just got out of college? […It's a] very narrow bandwidth of skills that you got to have, especially to be on a roof. It's dangerous, it's hot. And there's a lot of technical knowledge and wiring small things…. We don't have a problem with finding workers we have a problem with finding skilled guys."[114]

Finding "skilled guys" is a problem across the construction industry where Will, a member of a non-union contracting association described the aging workforce as a misdirection of training resources, "because of this, everyone has to go to college mentality."[115] His organization has tried to recruit workers from what Marx termed the latent and stagnant members of the labor reserve who are outside of formal employment. They focus on four major groups: high schoolers, incarcerated people, women, and people of color. They work from "the bottom up" going into high schools and correctional facilities "to talk up and promote our industry and the top down is getting into the legislature and every level of top government and get them convinced that they have to invest more in CTE [career and technical education]." [116] These efforts try to show that construction is for everyone and have especially targeted women who make up less than 3% of the blue-collar construction workforce. He pointed out the "corrections

department for the state of Georgia. They use the NCCER curriculum that we use in our high schools."[117] A challenge remains recruiting people to construction, which is often derided as a low-skill and contingent job.[118]

The other element of the changing industry is the introduction of lean construction techniques,

> we're addressing some of our productivity issues with things like modularization and prefabrication where everything doesn't have to come to a site to be built. It can be built more in a manufacturing component and brought to the site and just put together or it's prefabbed in an environment that's in a well-lit, safer, more efficient, and then comes to the job site. All those things bring efficiencies … there's some robots out there today, they're doing certain things in the construction [sites]. Someone said anything that's a repetitive motion, you can build a robot to do it…. It just is effective and efficient. And there's problems with people, availability of people to get to it, so, we're going to see some of our needs addressed and workforce needs addressed to bringing all these things together on time. But at the end of the day, it still takes people to do certain applications and we need to promote the career path, promote the career opportunity to young people, men and women.[119]

He argued that lean construction is a green construction method that wastes less and also takes less training as worksites are tailored to assemble prefabricated parts. Where numerous solar contractors pointed out that robotization is not possible in racking and installing a field of panels for a utility-scale solar array given that each has to be torqued to a very specific setting, Will illustrates how automation changes the forms of work and

leads to a divergent division of labor with distinct training pathways. There emerges a demand for white collar engineers, project managers, and technicians, skilled blue-collar workers who do technical jobs that cannot be automated, and laborers. The principle of efficiencies generated through "just in time" and prefabricated production does not address re-skilling or hiring for people thrown out of employment, which illustrates the on-going and needed role for community, union, and training partnerships. In the next section, I conclude with a discussion of the possibility of a transformed role for training alongside employment policy designed to address climate change.

Greening All Jobs

In this chapter, I have considered the counter-hegemonic ambitions of "green jobs" policies that framed labor as a socio-ecological relation and sought to create pathways to careers with living wages in energy efficiency and solar installation. This vision worked against the evisceration of employment and workfare policy following the Great Society programs in which new social conservative and neoliberal policymakers rolled back the welfare state to direct potential workers of the labor reserve back to employment. Training programs play an educative role in disciplining workers to the temporalities of wage labor and building skills that capital appropriates. Training and education can also create debt that serves to trap people in work – as critical analyses of the rising cost of higher education illustrate.[120] Training must be understood as socially-necessary labor that valorizes capital.[121]

Increasing access to apprenticeship and educational opportunities for people of color has been a consistent demand of organizers working in the tradition of the long civil

rights movement to create and place Black workers into "family-sustaining" jobs. Green jobs programs carried on this tradition, however, without utility, union, or state support to invest in clean energy, programs in Atlanta and elsewhere to recruit, train, and place workers in clean energy fields failed to create pathways to stable employment.

The partnerships that came together around clean energy employment have proven lasting and important to draw into conversation organizers with very different priorities around clean energy infrastructure. Green jobs elucidated "common threads between the exploitation of nature and the exploitation of people."[122] A Partnership for Southern Equity organizer, mused that a "green job could be anything." It could be a car salesman selling electric vehicles, a solar installer, a job in solar policy, or solar marketing. Talking about the broader need to green all employment opens a conversation about "dropping societal barriers" to getting into employment to begin with and changing the infrastructures directed to the social reproduction of labor.[123]

Clean energy policy thus becomes another site to contest the narrow focus of public investment on training that does not address job quality, the myriad barriers that trap people in low-wage work, and the divergence in wages and benefits in different occupations whether the educational pathway is a training program, an apprenticeship, or a college degree. Clean energy has been a visible site of organizing around the social reproduction of labor from "green jobs" to the Green New Deal resolution, which pairs federal clean energy investment with Medicare for all, an affordable housing commitment, and a federal jobs guarantee. The latter recuperates a demand for full employment championed by A. Philip Randolph in the March on Washington for Jobs and Freedom and revived by Coretta Scott King in the 1970s.[124] It builds also on years of

collaboration between environmental justice, labor, and Indigenous communities working to forge a model for a "just transition."[125] Comprehensive measures embedded in the Green New Deal resolution directly challenge racial and gender inequity built into the original New Deal that devalued employment predominately performed by migrants and people of color, especially women. Changing the legal limitations on collective bargaining works also to change the economic development model of the South based on low wage, non-union labor. These efforts to challenge the reproduction of labor endeavor to secure a social wage and reduce the coercive requirements to work for low wages to secure access to resources necessary to lead a healthy and dignified life.

In 1963, James Boggs offered a meditation on rising unemployment and the future of labor organizing in the era of automation "when man has to earn his right to live through work is rapidly drawing to a close." He called for new forms of political organizing in which "the question of the right to a full life has to be divorced completely from the question of work," denouncing the organization of social reproduction through the wage-labor relation.[126] Postone similarly argues that anti-capitalist politics would allow people to work less, putting the technologies of automation to work in eliminating unnecessary work rather than creating new labor demands to continue to valorize capital. I have argued here that training operates alongside workfare policies as a disciplinary strategy to direct people thrown out of employment back into work. Perhaps a future of work that manages electrified powered automation could allow, much as Van Jones envisioned, people to use their time in ways that benefit their communities. I turn next to the intersecting ways in which time is enrolled to reproduce value under the auspices of the state.

CHAPTER 7

THE RIGHT TIME TO DO GOOD

This chapter analyzes the role of the state that oversees electricity production and authorizes the accumulation regime that reproduces poverty for energy burdened Atlantans. I consider efforts to contest the state through coalition organizing to *Fight the Hike* that protests the relational politics of low-wages and unaffordable bills in the articulation of electricity to racial capitalist logics.[1] I investigate the constellations of community, labor, environmental, and faith activists who engage these politics of energy resources and rates in an effort to build energy democracy. Far from the stale socialist politics that Hall describes, contradictory alliances around the cost of energy challenge the fuel resources that Georgia Power uses and the logics that reproduce poverty through the energy system.

On March 14, 2019, Reverend Gerald Durley opened the "Moral Call for Action on Climate Change" at the Ebenezer Baptist Church in Atlanta. The event was convened by Reverend William Barber, who has spearheaded the Poor People's Campaign, A National Call for Moral Revival, and former Vice President Al Gore with the Climate Reality Project. Reverend Durley spoke as an Atlanta resident and board member of Interfaith Power and Light. His voice thundered through the loud speakers and a jumbotron hanging above magnified his image wreathed in the soft yellow light of electric chandeliers as he preached to the crowded church of environmental activists: "One of the things we learned in the Civil Rights Movement [with] Dr. King in '59 and

1960 whenever we would come together like this, [is] that there were two times in the Greek, two ways to tell time. One was called Chronos. Chronos means that there are sixty seconds in a minute, so many minutes in an hour, and when you knew that, you'll say chronologically, 'we'll do this.' But tonight is not a Chronos time, tonight is Kairos. Kairos means there is no time, there are no minutes, there are no hours, but we are divinely inspired to be here holding on to one and other and that we will go forth from this place and save Mother Earth."[2] A month later, at a rally to support solar energy in front of the Georgia Public Service Commission in downtown Atlanta on the first day of hearings to review the utility Georgia Power's Integrated Resource Plan, Reverend Durley affirmed that this is "a Kairos moment." Juxtaposing the moral imperative for concrete action on climate change as a rupture in the abstract time of Chronos, which measures the routine passage of everyday life, Durley identifies a powerful critique of the definition of time under racial capitalism. An abstract measure of time provides the logic for the value form that reinscribes race and gender to reify "fatal coupling of power and difference" in its operation.[3] Labor that is bound up with fossil-fueled energy systems, mediates all social relations and restrains action on climate change despite its uneven effects on poor people and people of color by suggesting a chronological and progressive order for proper action within the given form of social relations. Drawing lessons from the Civil Rights Movement, he insisted that the intertwined questions of racial and environmental justice could not operate on that time scale.

The rally aimed at Georgia Power sought to rush the timeline for renewable energy adoption given that electricity generation is the largest single source of greenhouse gas emissions in Georgia, and Georgia Power the largest producer.[4] The

Integrated Resource Plan is a twenty-year energy plan revised and presented before the Georgia Public Service Commission every three years and 2019 would be the first since the City of Atlanta adopted its commitment to 100% clean energy procurement by 2035 and Southern Company committed to low- to no-carbon operations by 2050. In a shareholder statement, Southern Company did not frame its commitment to decarbonize around the necessity for swift action on climate change, but rather as part of a strategy "to maximize long-term value to shareholders through a customer, community and stakeholder-focused business model that produces sustainable levels of return on energy infrastructure."[5] In a framework that is odds with the conceptualization of value as a social system that exploits people's time, the Southern Company asserts a definition of value derived from neoclassical economics. Value creation from this perspective results from capital investments that produce a cash flow with a rate of return above the cost of capital, thus generating returns to shareholders in terms of increases in the price of stock and dividends.[6] Implicit in Southern Company's statement are complex, regulatory processes through which state governments determine an allowable rate of return, or profit returned to shareholders, for its subsidiaries. The rate of return is based on the utility's total investment in infrastructure that supports electricity interwoven in all processes of everyday life.[7] In Georgia, the five-person Public Service Commission chosen through state-wide elections as established following the 1906 Atlanta Race Riot, oversees Georgia Power, which is also the only regulated utility in the state. It adjudicates the Integrated Resource Plan to determine which energy sources the utility will invest in and the rate case that determines the allowable rate of return on these investments for the utility.

I take as provocation Southern Company's understanding of value creation in the electricity sector and activist challenges to it to investigate the co-production of the regulator and utility that shape the economy of time in Atlanta. In Chapter Four, I chronicled the construction of Georgia Power as a regulated monopoly and examined how electrification enables value-extraction through all of life's work. In Chapter Five, I reviewed the union as a site where the reproduction of labor occurs and has mutated with the growth of contingent and temp labor. In Chapter Six, I investigated the extraction of unwaged labor in the context of training programs that reproduce and discipline workers to the temporalities of wage labor. Here, I consider the quasi-judicial, quasi-legislative state Public Service Commission, which has consistently operated hand-in-hand with the utility based on its narrow mission to "exercise its authority and influence to ensure that consumers receive safe, reliable and reasonably priced telecommunications, electric and natural gas services from financially viable and technically competent companies."[8] The networked intersections of these socio-ecological flows negotiated through the state and capital produce the uneven urban infrastructures of Atlanta.

In the first section, I recount the evolving role of the Commission that has supported the "grow-and-build" model of the utility to sustain electricity as central to doing "good business for business" in Georgia.[9] I analyze the ways in which value is produced through the electrification of everyday life, which customers pay for in the fee and rate structures that finance electricity infrastructure, most controversially at Plant Vogtle. I second turn to the "Green Tea Coalition," which formed in 2013 to demand solar be included in Georgia Power's fuel resource mix and presents a controversial marriage of conservationist, conservative, and Christian politics. Finally, I review

community organizing in Atlanta around the 2019 Georgia Power rate case to understand how electricity deepens the differentiation of people and places integral to the operation of value and bring to the fore the work of energy equity activists who imagine how electricity could be produced otherwise.

The politics that I analyze in this chapter parallel the transformation of Southern Conservatism since the Civil Rights Movement as Southern Democrats became Republicans, espousing small government, deregulation, and a pro-business, free market agenda. These colorblind terms also shrouded a political agenda to reduce state support for redistributive programs initiated under the New Deal and expanded as part of the Great Society.[10] Cooper analyzes the way in which religion becomes articulated to efforts reduce state support for social welfare and restore family values and responsibilities in response to queer, feminist, Indigenous, and Black nationalist politics. Contemporary Republican politics in Georgia embody the marriage of neoliberal and new social conservative ideologies of "the new religious right comprising conservative Catholics and evangelicals, the new paternalism of Lawrence Mead (the principal American architect of welfare-to-work programs), and the communitarian movement in social welfare."[11] The roll back of state services does not mean the state disappeared.[12] Rather, it continues to lend brazen support to foster a pro-business environment in Georgia including authorizing rate structures to attract industry and financing for nuclear construction that activists in Georgia have decried as "corporate welfare."[13]

In my analysis of the Public Service Commission, I illustrate how and why the state regulates electricity as a public good that is privately generated and how this relationship contributes to the reproduction of the peculiar role of labor under capitalism,

which mediates all social relations. In Chapter Six, I observed that for people receiving public assistance or subject to the penal system, the state can compel waged and unwaged labor that valorizes capital in requiring the direct expenditure of human labor time. Through labor, people reproduce the social relations based on the commodity form that structures racial capitalism. Here, I consider how the state also perpetuates the commodity form through the regulatory system that rationalizes the private ownership and sale of essential goods, such as electricity, necessary to a healthy and dignified life. For many middle-class people, an electric bill is a negligible monthly cost compared to housing, but for working-class people or those on a fixed income, energy bills are more burdensome and force people to make difficult decisions within everyday patterns of social reproduction, most notably turning up their air conditioning or turning down the heat below what is comfortable or healthy. Thirty-seven percent of households in the U.S. report struggling to pay their energy bills and affordability varies enormously by race.[14] Ten percent of white households report any energy insecurity compared to 20% of Asian, 44% of mixed-race, 45% of Latinx, 52% of Black, 54% of American Indian and Alaskan Native, and 75% of Native Hawaiian households.[15]

In the social conservative political framework that defines the contemporary Public Service Commission, energy costs are seen as a personal responsibility and energy burden as a reason people should work harder. The social mediation of the value form naturalizes disproportionate poverty in households of color and racism justifies state inaction to address energy burden reproduced through energy bills that the Commission authorizes. Contradictorily, I examine the articulation of state support for Southern Company's commitment to create value that uses the everyday energy demands of

ratepayers as collateral to finance its financial model based on constant growth of energy demand. In the following section, I consider the transformation of electric rates and fees charged by Georgia Power over time to pay off its construction costs. I argue that in authorizing a model that allows shareholders to profit from the high energy bills charged to all residential customers in Georgia, the state reproduces the value form based on the devaluation of social reproductive labor and the imperative of maintaining a good business climate for Georgia.

The Ideology of Growth

Following the Atlanta Race Riot in 1906, the state legislature expanded the authority of the Railroad Commission of Georgia, renamed the state Public Service Commission in 1922, to oversee rate charged by the electrical railroads and electricity companies in Georgia.[16] The move would eventually strip authority from the City of Atlanta, which subsequently lost the ability to set rates for the electric streetcar companies operating within city limits when the Railroad Commission authorized a rate increase that was upheld in state appellate court.[17] This regulatory framework formalized the utility as not a part of, but rather acting within the purview of state government to generate and transmit electricity. The most important of the protections offered to the regulated monopoly was the non-competitive service territory, which established "a discrete, bounded, and governed space" that Harrison argues

> acted as a spatial fix for the electric utility industry. By offsetting the contradictions inherent in electricity production and consumption, the service territory functioned to create a governable politico-spatial formation that enabled

> sustained economic growth…. Investment in new generation was suddenly much safer, as state utility commissions essentially guaranteed profits for investors.[18]

Building on Harvey's notion of the spatial fix for the tendency of over-accumulation inherent to capital,[19] Harrison observes that with monopoly control over a service territory the utility became an "opportunity for financial capital."[20] Under the purview of the Public Service Commission, Georgia Power "fixes" excess finance capital in generating plants and transmission lines as well as appliances, advertisements, and other measures intended to increase electricity demand.[21] The protected boundaries of the service territory were matched by a "cost of service" method of accounting in which profit for the company is based on the total amount spent on operation.[22] During a rate case, the Commission scrutinizes Georgia Power's expenses to ensure each was necessary and allows the utility to recover the costs and investments deemed appropriate on the electric rates charged to customers. Regulators also allow an approved rate of return.[23] This accounting design incentivized constant construction and constant advertising to generate new demand for electricity, under the "grow and build" model.[24] The relationship between utilities and regulators functions to reproduce electricity as it became a necessary input for capital accumulation and the reproduction of everyday life that powers household devices, industry, and flows of information networked through electrical infrastructure.

Throughout much of the 20th century, the grow-the-build model worked for regulators, ratepayers, and businesses as demand for electricity in Georgia grew exponentially. This rise was due in no small part to the utility's enormous efforts to market appliances and attract new business to the state. From 1940 to 1970, Georgia

Power's total annual electric sales increased from 1.75 billion kwh to 31.8 billion kwh.[25] Electrification opened new circuits for accumulation as the suburban expanse of Atlanta sprawled outward, creating demand for household appliances, streetlights, retail, and office space.[26] Change in average residential demand for Georgia Power customers increased from just over 600 kwh per year in 1930 to about 15,000 kwh per year in 2009.[27] To meet growing electrical demand, Georgia Power built seven coal plants, numerous hydro developments, and started construction on its first nuclear reactor, Plant Hatch.

During this period, the real price of electricity, fueled by cheap coal inputs, decreased 71%.[28] The utility went before the Public Service Commission to request only two increases in rates and ten rate reductions until 1970, which the Southern Company history attributes "to the efficiencies of larger and new technologies that created a declining-cost business and silky sailing through postwar America's glory days."[29] The silky sailing turned into choppy water in the 1970s with rising inflation. Georgia Power sought a rate increase or emergency rate relief every year between 1969 and 1976.[30] Facing popular protest from the Georgia Power Project, industrial customers, unions, and ratepayers, the Commission became more proactive - authorizing only portions of the rate increases Georgia Power requested.[31] Rate increases of any kind were met with opposition and the unlikely coalition of customers sued the company in 1974, attempting to overturn the rate hikes in court.[32] The case was thrown out, reaffirming the regulatory power of the Commission, yet the financial stability of the Company still hung in the balance.

Georgia Power was saved from possible bankruptcy when it entered into a partnership with the Oglethorpe Electric Membership Corporation, a bulk power purchasing cooperative formed by 39 electric membership corporations across the state that had previously purchased power from Georgia Power, without owning generation capacity. The EMCs had access to federal loans through the Rural Electrification Administration and could more easily raise capital than Georgia Power during the recession and Oglethorpe offered to purchase a stake in power plants under construction. The history of the Southern Company proudly states that "the sale of generation to federally backed cooperatives flew in the face of Southern Company tradition," yet the cash-strapped company gladly accepted the offer.[33] This partnership helped to finish the nuclear Plant Hatch, fund the nuclear Plant Vogtle and coal Plants Bowen and Scherer, which are two of the largest coal plants in the Western Hemisphere.[34] Where utilities across the country began to emphasize energy conservation and efficiency measures, Georgia stayed committed to growing and building. In part, electricity was still needed to meet the rapidly growing population of Georgia, which rose 130% between 1970 and 2019.

Elsewhere in the U.S., state and federal law responded to the energy crisis with regulatory and legislative changes to the governance of electricity. State legislatures moved to deregulate electricity following changes in federal legislation in 1978 and 1992 in an effort to build a free market in electricity generation and reduce the cost of power provision.[35] Georgia moved much more slowly. The 1973 Territorial Act fixed the boundaries of Georgia Power, while giving large commercial and industrial interests moving into Georgia the one-time opportunity to choose their electric provider would be

to introduce some competition between Georgia Power and the EMCs.[36] The subsequent 1990 Integrated Resource Plan Act, developed in response to the Clean Air Act Amendments, required the Commission to review Georgia Power's 20-year plan for energy procurement every three years.[37] The purview of regulators remained narrowly defined. Hugh, an energy consultant, noted that, "this is true in every for every state public service commission, they're economic regulators, they are responsible for evaluating decisions based solely on the economics of a project," defined only in cost terms.[38] The limited scope of the regulator and entanglement with the utility "becomes an impediment to change and impediment to doing things different from the way they've always been done."[39]

The issue of greatest concern is the expansion of Plant Vogtle to build two new nuclear reactors near the Savannah River Site as introduced in Chapter Five, which has unfolded with support from the federal and state government. The 2005 Energy Policy Act offered federal loan guarantees for technologies to reduce greenhouse gas emissions. The same month the Act was signed into law, Southern Company declared their intent to begin to investigate nuclear expansion.[40] The enormous cost of the project to the public is particularly controversial due to a measure adopted by the state assembly in 2009 – the year the Commission formally approved construction – that allows Georgia Power to collect a nuclear construction cost recovery (NCCR) charge for construction work in progress. Unlike the usual process through which the utility raises revenue to build new plants, and shareholders bear the risk, customers now face a fixed fee of about $100 a year on their bills that generates approximately $500 million annually.[41]

When construction began on the project, the total cost was anticipated to be $14 billion and the plant expected to come online in 2016. Numerous delays and cost overruns eventually led to the bankruptcy of the contractor Westinghouse. With the support of federal loan guarantees and the state Commission, Georgia Power has been able to continue to operate at a profit. A subsidiary of the Southern Company, Southern Nuclear took over management of the project, the estimated cost of which had nearly doubled to $28 billion.[42] In December 2017, the Commission required a one-time $75 bill credit as part of its authorization for work on the project to continue and adjusted the NCCR.[43] Three months later, it reduced the fee by $1.03 a month to keep "more money in the pockets of Georgia Power customers."[44] It also reduced the revenue requirement of the utility, the amount that can be added to customer bills. The then-Chairman Stan Wise said in a press release that, "We did not shirk our responsibility today…I believe these conditions are reasonable … and the long-term benefit that we will receive over the life of this project was the overriding factor in the Commission's decision today."[45] The projected long-term benefits of the nuclear expansion vary based on one's political perspective. Former Secretary of Energy under President Obama and current Southern Company board member Ernest Moniz describes the importance of the project to keep nuclear as a viable fuel option to address climate change.[46] Perhaps more cynically, the project represents the apex of Georgia Power's steadfast commitment to growth as the majority of the cost overruns will also be added to the company's rate base.

Ratepayers finance these debts on monthly or weekly bills that reflect the debts that utilities owe, and now, in Georgia, the future cost of running a third and fourth nuclear reactor at Plant Vogtle. [47] Tadiar describes the temporalities of financial

speculation in which the lives of workers and residents are also wagered, "as *risk-absorbing collateral*, particularly for state and state-allied enterprises, which can offer it bundled as wholesale life commodities promising future life-times of surplus labor and money (in the form of taxes) — value — that can be *advanced*, that is, cashed in *now*."[48] In other words, value extraction unfolds in "the virtual zone of *time*"[49] as people continue to fulfill the valorizing needs of capital everyday life, managing the financialization of their future time to justify a $28 billion nuclear plant in various ways.

Nuclear Watch South argued that the NCCR "removes the liability of speculation on financially risky reactor investment from the electric companies and places the risk on residential and small business electric customers" who are forced "to become investors" in future plants,[50] and forced to make changes to everyday life to account for higher bills that take time from people.[51] Elderly people forced to meet the fees on fixed incomes without a guarantee that the power plant now five years delayed will ever come online are hurt the most.[52] The nuclear charges (and federal loan guarantees) poured into Plant Vogtle wager the life in the present – extracted in monthly increments on power bills – to finance a modernizing vision held-over from the Cold War era and fettered to the military-industrial complex that helped to industrialize the New South.[53] As Tadiar aptly observes, the "seemingly limitless resource that is the future (as part of the seeming limitlessness of life itself) is in actuality the lives of people whose own futures are offered up as exchange values extractable in the present."[54]

The role of the Public Service Commission is to ensure the financial stability of the company. Value comes from the understanding that ratepayers in a captive territory will continue to use and pay for the inflated costs of electricity on their monthly bills. In

authorizing continued construction on the Plant, the Commission guarantees that customers will pay off those costs in moments of waged and unwaged work to which electricity is essential for years in the future. The NCCR uses future demand for power as collateral to hedge risk for the utility.

While increasing costs for ratepayers, the use of fees in particular exacerbates already uneven energy burden. Hugh explained that

> in Georgia Power's zeal to sell Plant Vogtle and to position itself as a great utility and … because the Public Service Commission is elected, rather than appointed, public service commissioners obviously have an incentive to try to paint electricity rates in Georgia as being lower than the national average. Well, there's a little bit of smoke and mirrors that's going on here. You can look at the volumetric rate on a Georgia Power bill, how much do we pay for each kilowatt hour? and you can compare that volumetric rate across the country and yep, Georgia power's volumetric rate is lower than the national average, but if you look only at the volumetric rate you ignore all the all the fixed costs that Georgia Power tacks on to its bill and they've increased substantially over time.[55]

In addition to the NCCR, there's an environmental charge that helps to pay for the cost of scrubbers and other pollution control technologies, a fuel charge, and up to nine other fixed charges such that when the full electricity bill is taken into account, Georgia Power customers pay some of the highest electricity costs in the country. Gross income inequality in Georgia means that it also has some of the highest concentrations of energy burden.[56] People on a fixed or low-income are also more likely to live in inefficient, older housing and more likely to be renters. Landlords have little incentive to invest in energy

efficiency as tenants usually pay the utility bills. For both low-income home-owners and renters, household energy cost increases "due primarily to the poor quality of homes, but it is also affected by outdated, inefficient heating and cooling systems."[57] In 1995, households receiving Aid to Families with Dependent Children in Atlanta spent an average 34% of household income on home energy compared to an average of 4% for the median income household.[58] Similar disparities in energy cost exist today where energy burden is estimated to eat up 18% of household income for individuals in the highest quartile of low-income energy users in the city.[59]

The rate and fee structures for the utility illustrate the ambivalent attitude of regulators on the issue of energy burden. Reba defined the production of energy burden as deeply rooted in the Southern economy. She named slavery as the most significant barrier to changing the energy system in Georgia because

> So much of this work goes back to the foundation of what the Southern economy [is] built off of. So, you have structural racism and inequities that don't allow for a true desire to serve everybody who lives here. There's this belief that haves and have-nots are the right thing.... Or they [elected officials] don't believe that there's inequity there, that people should just pull themselves up by their bootstraps, and it's America so everybody's equal and there's this fallacy of equal access to education to housing, on and on. If you're coming in with that belief, then it's going to be really hard for me to talk to you about how bad and inadequate the housing stock is in Atlanta for the working poor. Because what the conversation typically would go so well, 'it's all it's their fault, they should just move.' It's like, 'ok, let's step back a degree further. That's not possible. And here's why' [G]etting

some common ground on why do we have such economic injustice in the South, [means] people have to want to have a conversation I don't think people do.

The frameworks available to the Commission to address energy burden are mediated through the inter-related logics of white supremacy and the rule of value, which judges people based on their capacity to work. During the Integrated Resource Plan presented before the Commission in 2019 that considered a pilot program for an on-bill tariff to pay for energy efficiency improvements for renters, Reba noted that the entire debate was "coded in racist language," as the Commissioners debated subsidizing slum lords and the residents who rent from them. Where the utility makes money speculating on the future demands for electricity that customers will have in their everyday lives and would also make a significant rate of return off their proposed two million dollar investment to weatherize 200 homes, the Commission questioned the worthiness of low-income people in Atlanta to receive this service, despite the fact that they would eventually pay for it on their electric bills. The pervasive mentality that people should "just pull themselves up by their bootstraps," refuses to recognize the reproduction of racial and gender difference through instruments as banal as the light bill.

The application of the value theory I have elaborated here is a useful tool to illustrate the contradictions of a social form in which labor mediates all social relations. The expenditures of time that reproduce the value form are not always recognized as labor, nor do all people receive a wage for the value generating work that they do. Electricity regulation becomes an institution that reproduces difference in value assigned through all of life's work. In the next section I will discuss how these contradictions emerge in coalition organizing for clean energy.

Conservation, Conservatism, and Christ

In 2013, an unusual alliance formed to challenge the growth model of Georgia Power, which had to that point, refused to build or contract any wind or solar capacity and did not include any renewable generation in its Integrated Resource Plan filing. During the Integrated Resource Plan hearings, the Sierra Club, Republican Commissioner Bubba McDonald, and Atlanta Tea Party founder Debbie Dooley lobbied for solar. The final decision of the Public Service Commission mandated Georgia Power add 525 MW of solar to the grid, requiring renewable energy for the first time in the state, although the Commissioners still couched the decision in free market language. "This motion is not a mandate, but an expansion of Georgia Power's current solar portfolio," insisted Commissioner McDonald in a press release. Commissioner Tim Echols explained that it was a necessary response to "hedge against more coal regulation and natural gas price volatility. When the President [Obama] finishes his war on coal, he'll come after fracking, and gas prices will surely go up. We have to be ready."[60]

Following the Commission's decision, Sierra Club employees (not with the formal endorsement of the organization), solar industry representatives, and the Atlanta Tea Party joined to form the "Green Tea Coalition," hoping to continue to lobby for clean energy across the state, taking aim at the NCCR and the Georgia Territorial Act that protects Georgia Power's monopoly control over its service territory, including Atlanta.[61] The coalition also worked during the 2013 rate case to force Georgia Power to drop a fee for residential solar installation and two years later supported a legislative effort to open third-party financing options for solar installation through the Solar Power Free-Market

Financing Act of 2015.[62] Commissioner Echols described the support of the Atlanta Tea Party for clean energy as a "game changer" because the demonstrated support for solar across the political spectrum changed the political calculus of elected commissioners.[63] Commissioners Echols and McDonald have been consistent supporters of solar and have required the share of Georgia Power's electricity supply from solar to increase eight-fold since 2013. The move toward clean energy was not exactly the Kairos moment that represented a radical break for social justice as Reverend Durley envisioned that climate action should be. Rather, the decision falls squarely within the operation of the value form based on minimizing financial cost. Conservative support for clean energy has continued to grow in the voter base as well even as climate change skepticism remains. Only a quarter of the most conservative Republicans attribute climate change to human causes, however, there is broad support across self-identified Republicans for more funding into renewable energy research (77%), renewable energy generation (79%), tax rebates for customers who purchase electric vehicles and solar (70%), and regulating carbon dioxide (59%).[64]

The Green Tea Coalition has stalled – its champions at the Sierra Club moved on and Debbie Dooley has been organizing with a new group, Conservatives for Energy Freedom, which remained active in other campaigns across the South.[65] Other groups including the Georgians for Energy Freedom – replete with logo of the "Don't Tread on Me" snake refashioned as an electric cord – and the Evangelical Environmental Network have endorsed clean energy as a conservative issue.[66] Beth Bond from the Evangelical Environmental Network spoke during the 2019 Integrated Resource Plan hearings "to request the Georgia Public Service Commission to boldly act in regards to protecting the

life of the unborn which means more renewable and less fossil fuels." Without mentioning climate change, she detailed the requests of the Evangelical Environmental Network to protect "God's creation" and ensure "the womb to the tomb protection of life."[67] Her suggestion that Georgia Power increase its proposed one gigawatt of solar to ten gigawatts, exceeded the demands made by every other environmental organization except the Sierra Club, who pushed for construction of thirteen gigawatts over twenty years.[68] Further, Bond named a deep concern "with all our neighbors" and asked the Commission to do more "in the case of energy efficiency for working-class families," again requesting increased investment in a small program for an on-bill tariff financing for residential energy efficiency that the Sierra Club had also supported.[69]

The appeal to a Christian ethos of care may help move some of the commissioners toward greater clean energy adoption given the religiosity of the Commission, which notably re-opened on Zoom during Georgia's coronavirus lockdown with a bible reading from Joshua to urge Georgians "to be strong and courageous."[70] One person I interviewed explained that at a conference, a student had asked Commissioner Echols "what he thought about climate change. And his answer was that he didn't believe in abortion, [he said it] that plainly. And the student was like, 'oh he must not have understood my question,' so he asked it again. He answered it the exact same way." To the advocate, Commissioner Echols's answer did not make logical sense. Despite the confusing position on climate change, she pointed out that "he is the number one advocate for electric transportation, and renewables and energy efficiency," but "I'm not going to talk to him about climate change." In an interview with Public Radio International's *The World*, Commissioner McDonald also commented on how his faith guides his actions on

clean energy. Described as “a free-market guy” who is not especially concerned about the growing threat of man-made climate change, either. He also noted that “I'm not going to sit here and just say it's a bunch of ‘booey,’ because there may be some cause…But this Earth has been here a long time. And I'm a strong believer; I'm a Christian, and I know who's in charge.”[71] Clean energy politics are contradictory and articulated to a range of faith, business, anti-monopoly, climate change, and environmental and energy justice concerns.

The conservative bend of the current Commission also challenges clean energy advocates who try to push the Commission to take social and economic development considerations beyond the lowest possible cost of energy into account. Edward, the solar developer, described that the challenge starts with the utility because “their least favorite topic is social justice and lower-income families, and they would rather talk about nuclear waste, and they won't talk about nuclear waste. They just feel like it's not their job, it's not their responsibility.”[72] Given the intransigence of the utility to do anything more than talk about how “47% of their customers make less than 40,000,” advocates have tried to push the issue in state legislative and regulatory realms.[73] Efforts to lobby regulators to take low-income households and energy poverty into account have also been unsuccessful. Reba named, “Social justice - with that group… with the Commission… Georgia commission? No, that is not useful language. So, we just have to be thoughtful about what, how do they talk about it. That's where you're going to be talking more in the vein of creation care, you know try to pull in the language of Christianity to talk to them in their own language and go from there.” The challenge with working in the realm of religious responsibility for one’s neighbors and the Earth is that it can reinforce a

paternalism and obligation to charity without recognition or action on the underlying racial and economic inequalities. She continued, “even if you can connect on that and that's great, you have a little bit of a win there. But then, if that's the narrative you're staying in you're going to just get caught in that cycle. That [narrative]'s not going to ever allow you to break it, to rebuild it so that there's actual equality and equity.”[74] The intersections of religious and political conservatism within the Public Service Commission have advanced conservationist and renewable energy concerns, but fail to act on the ways in which inequity is reproduced through electricity bills.

Adding clean energy to the grid in a way that does not burden customers with the legacy costs of fossil fuels and nuclear generation in addition to the NCCR remains a pressing concern. Increasing implementation of energy efficiency and customer investment in solar self-generation and batteries means people are using less energy and therefore paying a smaller share of the volumetric costs that the utility has historically piled into rates. Hugh explained that “if one part of the customer base is all of a sudden, paying less than it did previously, and therefore, it's paying less of its fair share of those fixed costs [for transmission and distribution], that means that the rest of the ratepayers need to need to pick up that slack.” To address these changes requires restructuring utility rates to “reflect the new reality of electricity markets and changing customer profiles.”[75] There has been a recent push to expand time of use rate structures that charge different prices based on when a customer places demands on the grid and are intended to reflect the cost of power production at any given moment and further intensify the commodification of time.[76]

Georgia Power has phased out most of its coal plants and in the 2019 Integrated Resource Plan agreed to retire two more plants, Plant Hammond and Plant McIntosh leaving three coal plants in its network and several others that have been converted to gas generation.[77] Customers nonetheless bear other legacy costs tied to inadequate housing that is expensive to heat and cool in part due to the history of racial segregation and redlining, which Georgia Power also contributed to as discussed in Chapter Four. The poor quality of housing means the investment needed to address energy burden in the city is estimated to cost $2 billion.[78] Efforts to implement community solar were a non-starter in the Integrated Resource Plan and only a small pilot for an on-bill tariff to finance energy efficiency for renters in a way that addresses the serious burden energy costs put on low-income households in Georgia was approved. Just as value theory exposes the contradictions of a social form in which labor mediates all social relations, it is also a powerful tool to illustrate the limitations of coalitions built on terms of lowest possible price, which fundamentally agree on energy policy as long as it reduces cost. This aspect of clean energy is what originally brought the Great Tea coalition together and secured the inclusion of utility scale solar in Georgia Power's resource mix in 2013 based on a conservative politics of cost-savings that articulated to related conservative issues of conservation and Christian stewardship of the Earth. While this alliance agreed on lower-cost electricity, the policy recommendations it championed to reach this objective focused largely on residential solar, which requires property ownership to participate. Residential solar is thus limited in its ability to address the collective problems of climate change, the uneven cost of electricity, and the reproduction of racialized and gendered poverty through the electrical network. To alter the power relationships reproduced

through the utility requires a politics of solidarity with the most vulnerable stakeholders and centers their needs in the design and implementation of clean energy futures to begin to fashion energy democracy. The Green Tea Coalition faded in part due to the challenges of divergent political organizations working together. During the 2019 Integrated Resource Plan, the solar industry, environmental, racial justice, faith, and consumer advocates again came together to support adoption of solar and the expansion of energy efficiency programs. Maintaining this coalition of generally Left-leaning groups also presented a challenge during the subsequent rate case, as I examine in the next section, when special interests had to compete with the utility's definition of value based on the lowest cost of doing business.

Fight the Hike for Fair Energy Now!

In June 2019, Georgia Power released its proposed rate case that called for an increase in rates to recover an additional $2.2 billion over three years. The Company argued that these increases were necessary to fund grid improvements, replenish its natural disaster restoration fund, and clean up waste from coal generation. Absent from the proposal was any discussion of the costs of Plant Vogtle, which nevertheless hung over the proceedings. The proposal would have added $16.48 a month to the average residential bill through both an increase in the rates charged per kilowatt hour of electricity used and an increase in fees.[79] A proposed increase of the basic monthly service fee charged to all residential customers before they turn on their lights from $10 to $17.95 became a rallying point for community organizing to *Fight the Hike*.

The Partnership for Southern Equity, in coalition with faith and conservation organizations led by Black women, hosted community town halls in Atlanta and Savannah to raise awareness, gather letters in opposition to the proposed rate hike, and organize neighborhood carpools to hearings on the rate case.[80] The coalition also organized two rallies outside the Public Service Commission building next to the state capital in downtown Atlanta, where working people, students, elders, and church members who were not able to be at one of the three Monday morning hearings gathered. The Georgia Chapter of the Sierra Club and Georgia Solar Association also joined to host community meetings across the state in the home districts of each Commissioner.

In October 2019, I attended an evening town hall with Commissioner Echols at my local library. The room of about thirty people listened to a brief presentation from the Southern Alliance for Clean Energy and Commissioner Echols about the biggest issues in the rate case. A representative from the Georgia Solar Association posed the first question about the effects of the proposed increase in the basic service fee from "the solar perspective" of residential solar customers. For those who had or were interested in investing in self-generation, increasing fees that customers have to pay regardless of the amount of energy that they use disincentivizes solar investment. He asked whether the Commission would be willing to consider other strategies to incentivize solar. Other people also stood up to raise concerns about the effects of rate increases for homeowners who have installed solar panels and requested that Georgia Power offer a "net metering" rate, which would allow customers with solar panels to be compensated for the full value of the electricity that they generate and do not use that is returned to the grid.[81] Net

metering is more expensive for the utility, but makes residential solar installation a better financial investment for residential customers.

Throughout the two-hour town hall, the predominately white audience focused on environmental and climate issues, raising concerns about residential solar, home energy efficiency improvements, the cost of nuclear expansion in Georgia, climate change, and coal ash clean up. Georgia Power had requested $525 million dollars of the proposed rate increase to cap twenty-nine pits where coal ash is stored at eleven different coal plants. Environmental organizations across the state had raised concerns about Georgia Power's clean up strategy that would leave coal ash submerged in groundwater near waterways and sources of drinking water. A report commissioned by the Southern Environmental Law Center pointed to Georgia Power's own disclosure that its coal ash ponds were leaking and "contaminating groundwater with one or more toxic pollutants at levels exceeding the groundwater protection standard or other health-based standards."[82] The waste leaching into groundwater contains arsenic, selenium, mercury, boron, cobalt, radium, sulphate, nickel, and lead, which are known carcinogens and neurotoxins that enact slow violence against predominately poor and working class people on the fence lines of coal impoundments. Environmental organizations argued that ratepayers should not bear the cost of cleaning up coal ash especially when there was not a plan was in place to ensure proper storage away from waterways. Yet, Commissioner Echols retorted that to not give Georgia Power the rate increase to clean up coal ash would not be "fair" as the Company had been doing everything "right" until the regulatory agency that governs coal waste in Georgia interceded to review the Company's coal ash containment policy.[83] As Commissioner Echols defined the $525 million should be included in the rate

base because "we [meaning the Commissioners] are obligated to give them the resources that they need to run their company,"[84] even when the operation of the utility devalues the time of residents living with the effects of environmental contaminants.

I stood up during the question-and-answer period to ask about whether the commissioners had considered how the fee hike would affect renters, like myself and 37% of Georgia households, who already have limited options to improve the energy efficiency of their homes and have to adjust air conditioning, heating, or other appliances to try and decrease the cost of their bills.[85] Commissioner Echols responded to my question in listing all of the options that are available for homeowners, explaining, that if I were a homeowner, I too could access the free energy efficiency audit that the Company offers.[86] He seemed to assume that I, as a white, professionally-dressed student, would come to be a home-owner, or perhaps be married to a homeowner, and my current condition of over-paying for inadequate services was only a matter of choice. Black renters who testified at the Public Service Commission hearings in October, November, and December were not similarly admonished to purchase homes illustrating the intersecting processes of racial and class discrimination in Georgia's energy system that authorizes and perpetuates continued dispossession from working-class people and naturalizes disproportionate energy poverty in Black communities.[87]

At the request of my research collaborators, I agreed to speak at the Public Service Commission hearing on the rate case on November 25, 2019. The hearing room is configured like a courtroom. Company lawyers sit on the right side behind the court reporter and facing the bench where the five commissioners sit. Commission staff, industry, environmental, and public interest lawyers, and members of the public occupy

four cramped rows of black leather chairs at the back. I found a friend who works for Georgia Women for a New Direction and a Partnership for Southern Equity organizer I had met at a town hall and we compared notes on our planned testimony before the Commissioners filled in and Chairman McDonald called the meeting to order. The room was quiet compared to the previous hearings I had attended on the Integrated Resource Plan adjudicated earlier that year when a broad coalition of environmentalist, clean energy industry, democratic socialists, faith, and environmental justice organizers had packed the room during each hearing to demand more investment in clean energy. This hearing, snuck in three days before Thanksgiving, seemed strategically planned to limit public participation.

Chairman McDonald called members of the public who were each given three minutes to speak. A disabled vet came to protest a $1,200 bill that he was incorrectly charged. The Georgia Women for a New Direction organizer read a parable comparing Georgia Power to the playground bully, a mother of eight and the founder of Atlanta Parent Alliance, which supports Atlanta Public School parents in need of financial resources, protested the difficult choices that a rate increase would cause for those, “who cannot afford another hit or challenge.” She emphasized with the Company: “I understand that people need to make money, but please listen to us.” Wan Smith, the Just Energy Organizer from the Partnership for Southern Equity, explained the campaign that she had been a part of over the last several months and entered into the record some of the stories of people who could not be there that morning. Smith stated,

> I've spoken to hundreds of Georgians over the last few months and the unanimous response is no increase. Senior citizens relay fixed pensions and Social Security

> incomes that don't allow for increase having to decide between medicine that means splitting pills or skipping days or not getting their medicine all together. College students reflect on parents who are struggling to underwrite their education. Pastors lament benevolent funds that are insufficient to meet the needs of those in their communities and their parishioners who face disconnect. Parents who work 50 to 60 hours a week and cook meals and assist with homework and do whatever is necessary to maintain warm stable households for their families, for their children. Young working men and women who have just entered the workplace and attempt to navigate entry-level careers, which means entry-level wages while trying to pay down student loans and all the bills that come with this new independence they ask, and excuse my language, what the hell? literally that's what they're asking.[88]

Her testimony demanded that the Commission – comprised of four white men and one white woman – bear witness to choices that working-class people on whose behalf she was speaking face over kitchen tables and in church basements. Bringing every moment of social reproduction that demands electricity into focus, she insisted that

> you know them. You know that one out of six Georgians live in poverty. You know that Georgia is one of the poorest states in this country and you know that those numbers don't tell the stories of the folks who vote for you because they're more than just statistics they're more than just folks who fall into a median level or [low-]income household. I'm here this morning on behalf of these folks to remind you that we know that you commissioners are aware.[89]

She reminded the Commissioners that despite their long-standing and cozy relationship with Georgia Power, they are responsible to the people of Georgia who elect them – whether or not they could take off work or drive across the metro-Atlanta area and pay the parking fees to be there. These people, whose stories she brought into the room, should be the reason why the Commission regulates the private production of a vital commodity, rather than leaving it to the market alone. The mandate to maintain service for all Georgia residents stretching across these moments and countless others in Atlanta is what creates value for the utility. These ratepayers – and constituents to the Commissioners – are the reason that Georgia Power has a monopoly over its territory and the receives such a generous rate of return from the Commission. which abets the extraction of value from the territories of their homes and patterns of cooking, watching TV, and charging their phones.[90] Her Councilperson, Khalid Kamau, from South Fulton, which, he explained is "the Blackest big city in America," spoke next. He explained that:

> African Americans spend, because of this racial wealth gap that exists in America, we spend three times more on energy costs than other communities, and simply put my residents, especially my seniors on fixed incomes, cannot afford this hike it puts me in a really uncomfortable position as an elected official to have to explain to them this hike when the SEC reports I've seen show that Georgia Power has made over three billion dollars in the past three years.[91]

Councilperson Kamau's testimony identified where value comes from for the Company, who extract time unevenly from each of the people that Smith brought into the room. Two more presenters followed before my name was called. I walked up to the podium and repeated some of the concerns that I had shared at the town hall. I explained that,

> since 1907, the Public Service Commission has regulated Georgia Power and offers it a monopoly over much of Georgia's territory on the premise that it will provide safe, affordable, and reliable service to residents. As I understand it this means that the value of the company comes from the people of Georgia who comprise up to 87% of its customers. And so, while Georgia Power has since been a booster for economic development …. I think it is also important to consider the contributions of ordinary Georgians who work full time jobs – even when they don't pay a great wage – and the challenges that such a rate increase poses for us just as we face similar increase in the cost of housing, healthcare, and education.[92]

Reflecting on the correlation between energy poverty and evictions recorded across the Southeast,[93] I asked that the Public Service Commission consider electricity as a public good beyond the narrowly defined mandate to ensure safe, reliable, and reasonably priced electricity be offered from a financially-stable Company. I asked what it means for the Commission to adjudicate rate increases that threaten the housing security of renters in Georgia and extract profit for the Company through the electric bills of residents.

On December 12, 2019, I went back to the Public Service Commission. The room was decorated for the holidays with artificial holly pinned to the Commission bench and tiny wreaths with red velvet bows hanging below each commissioner's nameplate. Members of the public filled the two back rows of the hearing room also wearing red to signify not holiday cheer, but opposition to the rate hike. The meeting was called to order and Chairman McDonald announced that a stipulation to the proposal had been filed by Georgia Power in agreement with the Georgia Industrial Group, the Commercial Group, the Georgia Association of Manufacturers, Kroger, the Metropolitan Atlanta Rapid

Transit Authority, and the City of Atlanta. These large commercial, industrial, and public interests negotiated specific rates with the utility that they would be charged for their operations.[94] Importantly, these levels are usually lower than the rates offered to residential customers who pay the highest cost per unit of electricity used.[95] Interveners who had represented these and other parties were called to present their final opinions on the rate case before the Commission would issue its decision. Many spoke against the stipulation or to issues that had not yet been resolved, such as the allowable rate of return for the Company and the proposed changes to the rate structure for residential customers, before the Public Interest and Advocacy staff for the Commission who are charged with reviewing the filings and making a recommendation to the Commissioners on behalf of the citizens of Georgia stood up to speak.

A lawyer from the Public Service Commission staff explained why their office had not signed on to the stipulation brokered between the companies and its biggest customers. While he expressed, "no doubt that the parties who have signed on believe they're getting a benefit with result with respect to rate design, … it certainly appears that in return for that favorable rate treatment, the parties have agreed to a [capital] structure, particularly the earnings band that would provide ratepayers with significantly less benefit."[96] In other words, he continued, the largest users received favorable electric rates and agreed to higher residential costs as Georgia Power would be allowed to make $330 million in year above the national average for investor-owned electric utilities before being asked to return any of that profit to customers.

In their 2017 annual report, Southern Company articulates the ways in which electricity powers the economy of the South and invites shareholders to "Imagine

creating value." The report continues: "Our commitment to keep customers at the center of all we do has been the cornerstone of our business throughout Southern Company's history. We believe this commitment ultimately translates to value creation for investors, and this has been borne out in the results we've delivered over time."[97] The Commission attorney called into question this assertion, noting that "if the interest of ratepayers, the interests of customers are the same [as the Company], it shouldn't take over three hundred million dollars a year to incentivize the company to act in the customers' best interest."[98] The "value creation for investors" that Southern Company promises is based on monopoly control of a service territory and a customer base stretching across Mississippi, Alabama, and Georgia and the decisions of state Public Service Commissions charged with representing customers to determine the rates that residential customers in every household pay for the electricity used. The Commission attorney emphasized repeatedly throughout fourteen minutes of testimony that the decision of whether or not to grant the Company its requested rate of return was a decision of the elected Commission, who have the authority to reject the agreement between Georgia Power and its largest customers and determine a rate structure that would secure more affordable electricity for all Georgia Power customers.

A Georgia Power representative responded, and the floor was open for comment from the public. A handful of people wearing red stood up to speak on issues ranging from net metering to the basic service charge fee. The Executive Director of Georgia Women for a New Direction was the last person to speak. She reframed the points that the Commission staff raised as a value proposition:

> Living in a state that is part of a region that already has and will continue to bear the economic and environmental burdens of climate change, it is unconscionable to think that you all, our public service commissioners, would knowingly decide to pour gasoline on the fire and require Georgia residents to pay even more to be impacted in a worse way. These are your neighbors, these are your constituents, and it feels as though you are throwing us under the bus.... Your decisions show in practice the values of the Public Service Commission – some people are more valuable than others. The Public Service Commission has decided that Georgia residents must be sacrificed for the whole, you have made that very clear. Please don't do the fee hike.[99]

Her testimony identified that the division of labor enforced through the Georgia Power rate case proposal and stipulation signed onto by the largest rate providers in Georgia that reenacts the same pattern of "low wages" for residents and "low energy costs" for industry that mean high energy for the average household, paid through time taken from residents and ratepayers in Georgia.

Despite more than 20,000 people speaking in opposition to the rate hike,[100] the Public Service Commission approved the stipulation on December 17, 2019, agreeing to the rate structure requested by Georgia Power's largest customers. The final settlement also offered a net metering rate to the first 5,000 residential solar customers to enroll.[101] Net metering benefits the solar industry and homeowners who have residential solar installed and this measure that the solar industry has sought for years to increase demand for residential solar and offer some stability to the vulnerable industry was proposed as a last minute amendment by Commissioner Echols. However, the carve-out for solar was

paired with other items that will exacerbate energy burden for the poorest customers. The Public Service Commission voted to increase the basic service fee for residential customers from $10 to $14 a month over three years, raising the average bill for customers using the smallest amount of electricity by just under $6 a month.[102] While not authorizing the full amount that the Company requested, the cost of clean-up for coal ash was passed on to customers and the decision also granted the Company a 10.5% rate of return. Commissioner Echols, who had missed the moving testimony of the commission staff the prior week when he was in New York City for the S&P Global Platts awards ceremony, put forth the final rate plan. Chairman McDonalds sought to amend down the rate of return, saying the cost over-runs at Plant Vogtle did not deserve the Commission's reward, yet he could not get a second for his motion. Commissioner Echols explained that he had heard in New York while being honored at an industry gala that the Company simply couldn't go below 10.5%.[103] The capital structure and return granted to Georgia Power likely means that the Company will not have to issue additional stocks to cover its mushrooming construction costs at Plant Vogtle.[104] An investment guide that Sierra Club volunteers circulated on the Clean Energy For All Georgia listserv in the week after the decision reported that the return is so generous, Southern Company stock should be seen "as an investment-grade bond with the state's PSC serving as a type of implied government insurance for its dividend."[105] From January 2019 to January 2020 the price of Southern Company stock increased from just under $45 a share to just over $70 a share. The dividend to stockholders might be insured through the government and yet is extracted in the electric bills of ratepayers who valorize the utility each time they flip on a switch.

The operation of the value form under racial capitalism relies upon and reinforces racial and gender difference alongside class. Moving testimonies of Black women illustrated the unwaged work in which electricity is imbricated that valorizes the utility in demand from renters, young people, and old people whose lives are intimately connected through the electric grid even as they do make enough to pay their electric bills. Hearing these accounts, the Commission did not grant the full increase in the basic service charge to customers yet nonetheless authorized the extension of a system that creates uneven burdens and exacerbates racialized poverty.

In her analysis of racial capitalism, Gilmore begins to theorize "nonfatal power-difference couplings" that require attention to mutuality and the intimate relations connected through the electric grid begin to work toward the abolition of system that reproduce vulnerability to premature death.[106] Where electricity pulls various stakeholders together, the valuation of some is linked to the devaluation of others in the narrow-minded political calculus of price. Naming the violence of these racial logics that cohere in socio-ecological relations across the electric grid is necessary to build solidarity around dismantling the utility and regulatory apparatus that authorize poverty.[107] In the next section, I situate this organizing within the long civil rights movement and describe how faith leaders in Atlanta have challenged the morality of the value form that unevenly steals time from people.

Stealing Time Back for an Equitable Energy Future

At the Moral Call to Action that opened this chapter, Reverend Durley's opening sermon was followed by a rabbi and imam, who interpreted the need for climate action in

their faith, community activists, and former Vice President Gore, who spoke as a Southern Baptist to challenge the deployment of faith in Southern politics that justifies climate change denial. Reverend Barber offered a closing sermon for the evening in which he denounced elected leaders who fail to act in the face environmental injustice. He preached that "Jesus even said in his opening sermon, his evangelical sermon, the sermon that defines what evangelicalism is, which is not are you for prayers in school? are you against women? are you against taxes? are you for guns?" Rather, "when you claim to be evangelical it means "to preach good news to the *poor*…those who have *been made* poor, who are *hurt* because they are poor, are *poisoned* because they are poor, and who are *stepped on* because they are poor."[108] Moral deeds are those in solidarity with the poor. He repeated as a refrain that the right time to take action on poverty and climate change and environmental racism, "the right time to do good, is right now." Doing good work in the South, as he named that night is even more important because "Not only has the South been the place of some of the worst hatred, it has also been the birthing ground of some of the best revolutions."[109]

In working to change the unequal cost of electricity that Black and poor customers in Atlanta pay, the Partnership for Southern Equity imagines a radically different energy system, seeking the rupture of Kairos to which Reverend Durley, whose sermon opened this chapter referred – through the collective imagination of energy equity that works against electricity capital's vectors of value extraction. The state sustains the conditions necessary to secure accumulation into the future and does not protect residential customers from the excesses of financial capital that move through the power plant, up the poles, along the transmission lines, down the converter boxes, and into the

homes of people paying electric bills to Georgia Power. Despite the intimate connections that people have to the state through their everyday uses of electricity, the Commission refused to recognize the ways in which these moments valorize the utility or the ways in which they unevenly appropriate the time of people that reinforces historically and socially created difference based on the intersections of race, gender, age, and ability embedded within the urban landscape. Simultaneously, the state recognized the benefits of residential solar to the electric system, allowing a net metering rate that it had opposed for years. The contradictory movement to recognize some expenditures of time as value-generative and others as not, is in line with Robertson and Wainwright's analysis of the valuation of ecosystem services. They note that capital requires cheap inputs of labor, land, and resources to operate and it could not afford the valuation of all resources it takes. The state slowly mediates the extension of the value form to price and protect certain ecosystem services or commoditize certain inputs. Its function under capitalism is "to ensure that the capitalist value form expands but prevent it from becoming the sole means of determining the identification of objects and the measurement of their qualities."[110] In other words, within the rate case proceedings, the state has begun to acknowledge certain environmental goods, while refusing to see the social reproduction of households that manage increases in electric bills under a low-wage labor regime as also productive of value.

Advocates have contested the state in numerous ways. Some question the structure of electricity regulation all together, drawing into focus the history developed in Chapter Four to point out that the direct election of the Commission is political pandering to an anti-monopoly electorate and the election of Commissioners at the state level means

that regions such as the Atlanta metro area where the majority of residents vote Democratic and are people of color continue to be represented by conservative and white Republicans. One advocate named that a Commission appointed by the Governor, as the majority of states outside of the South do, would ensure that you at least get "better quality" people who know more energy regulation, regardless of their politics. Countless candidates and campaigns have also fought to change the Commission through the ballot box in the tradition of civil rights organizing both to secure and defend the right to vote and to struggle for a more democratic state that represents Black people.

Following the decision in the rate case in December 2019, the Partnership for Southern Equity and its coalition partners initiated a new campaign to educate voters about the 2020 election when two commission seats will be open. Working within the regulatory structure of electricity provision in Georgia, Nathaniel explained that at the ballot box, "we can remind the Public Service Commissioners who their real bosses are – Georgia voters."[111] Rejecting the designation of some people as less valuable than others to secure the Company's financial stability, the Partnership for Southern Equity insistently prioritizes the central issue of energy burden as emerging from the overcharge of customers through utility rates and enacts a demand for energy democracy to challenge the regulatory structure that appropriates value from everyday life. In the following chapter, I return to energy democracy to close my analysis of electricity's role in shaping Atlanta and the social reproduction of labor.

CHAPTER 8

CONCLUSION

On May 15, 2020, the Partnership for Southern Equity hosted a Just Energy Circle meeting on Zoom following social distancing guidelines adopted in response to the coronavirus pandemic. Electricity made it possible for seventy-four people to tune in to the meeting to hear updates and find resources. Chandra from the Partnership for Southern Equity described work her organization has led to stop utility shut-offs due to non- or partial-payment. The Georgia Public Service Commission had ordered Georgia Power to suspend disconnections when Governor Kemp's shelter-in-place order went into effect. The federal CARES Act stimulus in response to coronavirus authorized additional funding for the Low-Income Home Energy Assistance Program (LIHEAP), which has usually run out of money for bill-payment assistance by April. The Fulton Atlanta Community Action Agency, which disperses that money in Atlanta announced that they had already helped 13,000 people access LIHEAP since January. Getting people access to these services was crucial explained advocates going back and forth in the Zoom chat to prevent high balances that people out of work would not be able to repay after the moratorium was lifted.

A man called in from Knoxville and asked whether there would be any green jobs from the stimulus efforts because people there really need the work. Neil, with the Sierra Club, urged people on the call to sign a petition requesting that the Federal Energy Regulatory Commission suspend the permit to a natural gas compressor station on a

pipeline moving natural gas to power plants in Florida, which had just been authorized to open in Albany, Georgia. The community where the compressor station sits is nearly three-quarters African American and has been an epicenter of the coronavirus outbreak. The Sierra Club was petitioning the federal and state government to act because any additional increase in air pollution could be fatal. The call ended with Nathaniel, CEO of the Partnership for Southern Equity, quoting Outkast to explain that "the South has something to say," and in the tradition of the long civil rights movement, he explained that the intersections of racist systems that devalue people's time demand a renewed commitment to the struggle that is eternal because "the fight continues."[1] The organizing at the Public Service Commission did not achieve the outcome that the coalition to *Fight the Hike* had envisioned, yet to say that the fight continues is to reject the racially uneven development inherent to the operation of racial capitalism in the U.S. South and to stand with generations of organizers who have fought violence, oppression, and the appropriation of their labor. The work of the long civil rights movement in this frame is the joining of demands for environmental justice, jobs, education, reproductive justice, affordable housing, the end to utility shut-offs, and affordable, carbon-free energy to the historical and long-term work of Black workers in Atlanta who fight back against devaluation and have led transformative change within and building out from the city.

In this dissertation, I set out to understand why electricity becomes a site of struggle that encompasses the diverse concerns raised on the Zoom call about utility bills and pollution that connect broadly to the uneven structures that devalue the time of people of color and poor people. These particular intersections of electricity and public policy in Georgia come together to reinforce a racial capitalist logic dependent on the

energy system. Value theory – like much of energy policy – elicits wonky debates. It is enormously useful, however, to attend to the particular relationships between time, money, and devaluation in Atlanta that power the accumulation regime in the New South.

A Marxist theoretical framework posits value, expressed as money, at the core of social relations. This means that the interactions we have with others are mediated through relations based on money, which is necessary to everyday life, to buy food, pay rent, and pay the light bill. These commodified demands require people to keep working and, in the process, reproduce the very relations that define a capitalist system. Labor reproduces class division and, what Gilmore, building on Hall, identifies as the "fatal couplings of power and difference" rooted in race, gender, nationality, and ability.[2] Value cannot only be seen as reproducing class, but also requires and reinforces embodied difference.

I built on feminist critiques of value to argue for an expansion of the value form that takes into account the forms of unwaged labor and social experience harnessed to reproduce the racial capitalist system and the uneven formations of difference that devalue some people's time. Value in this framework comes from waged labor as well as appropriable social experiences in which people direct their energies to reproducing the social mediation.[3] I analyzed these critiques alongside energy studies and political ecology that problematize the boundless growth of the capitalist form, which simultaneously destroys the environment, pollutes the atmosphere, and responds to ecological destruction by commodifying nature in new ways.

Research Contributions

My contribution in this dissertation is to illustrate the contradictory ways in which racial capitalism exploits ecological and social relations through electrification. Marxist theory posits the tendency of capital to substitute machines, powered by electricity, for workers, eliminating the source of value from production. This creates a crisis of social reproduction, which is resolved in myriad ways, which are both spatial and temporal through a shifting constellation of sources including the state, family, community, church, union, and capital.[4] The unwaged labor necessary for people to reproduce themselves as workers is socially necessary labor that capital appropriates as it also grows more energy intensive.

I developed this analytical framework to answer the inter-related questions: **1.) How does electricity contribute to the uneven reproduction of racialized and gendered labor relations? and 2.) Why and how does clean energy policy become a site of organizing to challenge the reproduction of uneven conditions of labor?** These questions overlap in seeking to identify first, how electricity affects the systems of social reproduction that appropriate waged and unwaged labor time, and second, whether these labor relations could change with efforts to decarbonize electricity. I have focused on the intersections of the utility, the union, the training program, and the state as sites through which new moments of everyday life come to generate value. I selected these sites because they offer geographically distinct perspectives into the ways in which the social reproduction of labor and the politics of devaluation are contested. Where Bluestone and Harrison quip that the South attracted business based on "low labor costs, low tax rates,

[and] low energy costs," understanding how this relationship effects the social reproduction of labor became central to my dissertation.[5]

In Chapter Four, I analyzed the historical production of the urban electric utility that granted monopoly control of Atlanta's service territory to Georgia Power. The utility was instrumental in contributing to the uneven spatial growth of the city and temporal demands for electricity in an effort to grow its own customer base. This research builds on scholarship of racial capitalism within urban political ecology and draws attention to the role of electricity in reproducing power relations based on racial and gender difference in the city. I consider city policy over the last decade to challenge Georgia Power's control over the city's electric infrastructure and the constraints of state law that preempt Atlanta's efforts to implement clean energy and energy efficiency to address the high energy burden that low- and fixed-income households in Atlanta face.

In Chapter Five, I investigated the union that represents Georgia Power employees. Where Georgia Power promoted the non-union workforce of the South across the U.S. in an effort to attract investment to the Georgia, it has maintained an important relationship with its own workforce that organized during the First World War. I consider the union as a contradictory site in the social reproduction of labor that sought to standardize the times of the employment contract and contests the devaluation of labor, while also reproducing differentiation through racial and gender discrimination that contributed to the devaluation of Black worker's time. Black workers organized and fought the devaluation of their time through civil rights litigation that extended from the long civil rights era to demand fair and safe working conditions. On-going efforts to conserve the jobs that the union has organized means that the union supports the utility

on nuclear and other polluting energy sources. The introduction of solar energy re-introduces contingent labor forms to the electric grid that are reproduced in part through the articulation of the state and utility, which have taken conflicting positions on solar development.

In Chapter Six, I analyzed the training program as a social reproductive infrastructure articulated to workfare that responds to technological change powered through electrification. While training intends to provide workers with the connections, resources, and skills to access high-wage careers, it is also an educational relationship that disciplines workers to the temporalities of wage labor and builds skills that capital appropriates in what is most often unwaged labor. I studied the uneven outcomes of training initiatives through an etymology of "green jobs" that traces green employment policies from when they were first proposed in the 1970s to the present. The increasing emphasis on training alongside workfare reforms means that state support is focused on reproducing workers and appropriates uncompensated time from trainees. I reviewed the training programs that hired people for green jobs in Atlanta following the 2008 financial crash and contrast union and community-based initiatives that sought to direct public resources to public employment with on-the-job training.

In Chapter Seven, I considered the role of the state in reproducing the value form by authorizing the commodification of electricity that is a vital to everyday life, yet unaffordable to many in Atlanta who face high energy burden shaped through the infrastructures of the built environment and labor market that Georgia Power helped to create. I analyzed the range of advocates who contest the operation of the rule of value at the Public Service Commission where electricity provision is evaluated under the narrow

mandate for “safe, reliable, and reasonably priced” service, which has historically benefited business in Georgia. Based on its low price point, the Commission has been willing to slowly mandate renewable energies yet refused to recognize other moments of everyday life and labor brought into the proceedings and authorized a rate increase that will disproportionately hit already energy-burdened customers. The rate case evidenced the operation of the state to extend and stabilize the rule of value and also illustrates the competing interests engaged in defining organizing for energy democracy.

Future Research and Concluding Thoughts

In the course of writing, I engaged various ideas that I plan to research more fully in future iterations of this work which fall into four major groups. The first concerns the political influence of Christianity in the South, which I found was necessary to tell the story about the role of the state in Georgia and specifically the Public Service Commission. I was initially uncomfortable with this prospect, but as an organizer told me early on my research, you cannot understand the South without thinking about the church. I have attended countless meetings in churches since moving to Georgia and participated in events at six different houses of worship throughout my fieldwork. Faith leaders are prominent advocates for clean energy in Atlanta and the campaign to *Fight the Hike* was led by faith groups in coalition with the Partnership for Southern Equity. Scholars in Geography have discussed the role of faith in Atlanta, the role of activism and the church, and the religious right in Southern politics in addition to scholarship on the role of the church in the Civil Rights Movement. Engagement with this literature would help me contextualize the conflicting politics of conservative support for solar.

Second, in the future I will seek a deeper engagement with critical scholarship on digital technology, science and technology studies, and the future of work. I do not address significant questions that my theoretical framework opens about the new ways in which people's time is productively enrolled, though uncompensated, through data collection from using online services and social media. There are many ways in which information collected on users over time is commodified. Targeted advertising is the most familiar to me, but only the tip of the iceberg in which everyday, life-making social capacities are appropriated with significant ecological cost in the electricity required to manage data. A Facebook data center, for instance, is the among the biggest renewable energy projects in Georgia.

Third, there are important historical moments within the history of electricity to which I will in the future give more attention. During the New Deal, Georgia Power litigated against the Tennessee Valley Authority and also promoted its rural electrification efforts as the Rural Electrification Administration began to connect farms. Marable points to the electrification of agriculture as abetting a process of "racial destruction."[6] Greater attention to these moments will help me to understand the relationship between Atlanta and the rest of Georgia and think through theoretical interventions on primitive accumulation used to describe the subsumption of new spatial and temporal realms into capital. Another important moment that will get more attention is the energy crisis of the 1970s that spurred deregulation in the electricity sector. Where Georgia Power remains a fully regulated utility, deregulation that began to be initiated in the 1970s will shape the future of electrification.

Finally, this dissertation has focused on abstract time as it structures the social mediation of the value form under racial capitalism. Importantly, Postone observes that the structure of social time that capitalism authors is not only a measure of minutes, weeks, and days, but also presents a historical trajectory that defines cultural notions of progress and constructs uneven development.[7] I began to examine these long temporalities in the context of white supremacist progressive politics in the New South and in the context of the long civil rights movement, but in future research, I want to engage more deeply with interventions that disrupt the hegemonic temporality of linear and progressive time. Discussions in queer, Indigenous, and postcolonial studies disrupt ideas of sequentiality and engage in futuristic imagining. Of particular relevance to this project are interventions that critique liberal notions of climate change as an apocalyptic and existential concern that threatens to take time from future generations and thus presents a new opportunity for collective politics even as Black, Indigenous, migrant, poor, coastal, and environmental justice communities in the U.S. insist that the effects of climate change are not being and will not be evenly felt. Heather Davis, Mabel Gergen, Kara Keeling, Sara Smith, Zoe Todd, Pavithra Vasudevan, and Kyle Whyte consider the continuities of world changing processes of colonialism and racial capitalism that must be considered in analyzing the disruptive possibilities of climate change and taken into account to realize emancipatory futures.[8]

Put within the framework that I have sought to develop here, a politics built on conserving future time is inadequate without an understanding of the ways in which time is unevenly appropriated in the present to reproduce poverty and vulnerability to climate change. Radical visions to dismantle fossil fuel infrastructure and implement clean

energy in a way that "shifts the center" to focus on the "margins" look to history. The Socialist Man might be dead, but the worker in a green job is a revisionist and more inclusive effort to revive collective politics and the New Deal coalition of union members, Black, migrant, and ethnic voters, the working poor and benefit recipients, liberals, and radicals. This hope as presented in the Green New Deal is "anti-capitalist in spirit," striving to address the "South's apartheid practices" that reverberated through the original New Deal, and substantiate the full employment commitment from the watered-down Humphrey-Hawkins Act.[9] The Green New Deal resolution calls for housing, Medicare for All, and clean energy and transportation to ensure adequate access to the means of social reproduction regardless of employment.[10] Most importantly, the Green New Deal has mobilized people, which is central to collective politics.[11] However, as Nick Estes, insists "it must go further." He points to the Red Deal developed by the Red Nation, which is a coalition of Native and non-Native activists committed to decolonization, revolutionary socialism, and queer Indigenous feminism,[12] and names the importance of not only standing against extractive capitalism, but also points that what "Indigenous resistance stands for: caretaking and creating just relations between human and nonhuman worlds on a planet thoroughly devastated by capitalism."[13]

The Gulf South for a Green New Deal policy platform also draws upon historical struggles for Black liberation rooted in the South and on-going organizing by Indigenous and frontline communities that live near and work in the petrochemical industry. Their demands for a Green New Deal that focuses on the South are inter-twined with a call for accountability to "collective community visions" and "inclusive and democratic processes" of policy design and implementation.[14] In both the Red Deal and Gulf South

Green New Deal, locally rooted and collectively devised visions of alternative futures build on the national resolution to echo demands for not only a different kind of policy, but a different kind of state that can work against capital to support community needs. To return to Fairchild and Weinrub's thesis on energy democracy as a process to reengineer a carbon-free and just energy system that "plant[s] the seeds for a larger movement for structural change," a democratic vision for an alternative energy system must be rooted in the particular relationships of place and the personal relationships that develop there to collectively envision local manifestations of just relations.[15]

In Atlanta these relationships unfold in myriad settings from Zoom calls to hearings inside the Public Service Commission and rallies outside. They build in solidarity organizing between labor and community groups, environmental justice and reproductive justice organizations, and Black-led energy equity organizing and predominately white environmental and conservation groups. Energy democracy is about building and nourishing these connections. If this dissertation has in part been a meditation on the relational processes of valuation and devaluation that shape Atlanta, it has also shown the connections that reach between "differently laboring people" and the intimacies that follow through electric infrastructure in connecting people and places together.[16] Energy democracy asks that we center these relations in an effort to understand the operation of power and difference and in so doing envision non-fatal and life-affirming relations that reject the devaluation of time.

CHAPTER NOTES

Notes to Chapter 1

[1] "Home."

[2] Participant observation, September 30, 2019

[3] "Table, Reliability_2018 from Annual Electric Power Industry Report, Form EIA-861 Detailed Data Files."

[4] Mitchell, Marston, and Katz, "Life's Work," 1.

[5] Marx, *Capital: A Critique of Political Economy, Volume I*; see also Ekers and Loftus, "Revitalizing the Production of Nature Thesis."

[6] Bhattacharya, *Social Reproduction Theory: Remapping Class, Recentering Oppression*; Dalla Costa and James, "The Power of Women and the Subversion of the Community"; Davis, *Women, Race & Class*; Federici, *Caliban and the Witch: Women, the Body, and Primitive Accumulation*; Fortunati, *Arcane of Reproduction*.

[7] Hall, "Gramsci's Relevance for the Study of Race and Ethnicity."

[8] Davis, *Women, Race & Class*; Robinson, *Black Marxism: The Making of the Black Radical Tradition*.

[9] Cooper, "Workfare, Familyfare, Godfare"; Cooper, *Family Values*; Katz, "Vagabond Capitalism and the Necessity of Social Reproduction"; Mitchell, Marston, and Katz, "Life's Work"; Tadiar, *Things Fall Away*; Tadiar, "Life-Times of Disposability within Global Neoliberalism."

[10] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*. An immanent critique is taken from a standpoint within the object of study in an effort to interrogate the structuring logics upon which a system of thought is based and therefore expose its contradictions. Marx's Capital, Volume I offers an imminent critique of political economy, working within its frameworks to dissect political economy and its use of Ricardo's labor theory of value. Postone reads the Grundrisse against what he terms "traditional" Marxist scholarship from the standpoint of labor to argue against the commonly asserted interpretation that Marx advocated a politics of distribution that saw workers as the producers of all wealth who should or could reclaim the surplus value of their work. For Postone, a different distribution of wealth produced under capitalism is insufficient to overthrowing the capitalist value form in which all of social life is mediated through commodity relations based on the structuring logics of value-generating labor time. He posits that reading the Grundrisse is necessary to see this conceptual project within Marx's scholarship, given the confusing nature of producing an imminent critique, which relies upon the language of its object of critique. I understand Postone's thesis as imminent to traditional Marxism, where he argues that Marx's "immanent critique of capitalism is such that the indication of the historical specificity of the object of thought reflexively implies the historical specificity of his theory, that is, the thought itself that grasps the object." Postone similarly examines the historical specificity of Marxist critique as applied by the Frankfurt school to more contemporary conditions of the information age and state capitalism during the Cold War. Postone, 82; see also Postone, "Marx's Capital after 150 Years."

[11] Mitchell, Marston, and Katz, "Life's Work," 3.

[12] Gilmore, "Abolition Geography and the Problem of Innocence," 228; Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*, 28.

[13] Hall, "Race, Articulation, and Societies in Structured Dominance"; Lowe, *The Intimacies of Four Continents*.

[14] Bellamy and Diamanti, *Materialism and the Critique of Energy*; Huber, "Energizing Historical Materialism"; Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*; Pinkus, *Fuel: A Speculative Dictionary*; Szeman, "System Failure."

[15] Huber, *Lifeblood: Oil, Freedom, and the Forces of Capital*, 25.

[16] Desbiens, "Producing North and South"; Kaika, *City of Flows: Modernity, Nature, and the City*; Manganiello, *Southern Water, Southern Power*; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; White, *The Organic Machine*.
[17] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Mulvaney, "Are Green Jobs Just Jobs?"; Mulvaney, *Solar Power*; Manganiello, *Southern Water, Southern Power*; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; Scott, *Removing Mountains: Extracting Nature and Identity in the Appalachian Coalfields*; Stanley, "Wasted Life."
[18] Anand, Gupta, and Appel, *The Promise of Infrastructure*; Fairchild and Weinrub, *Energy Democracy*; Harrison, "Race, Space, and Electric Power"; Harrison and Popke, "'Because You Got to Have Heat'- The Networked Assemblage of Energy Poverty in Eastern North Carolina"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Lennon, "Decolonizing Energy"; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; Nixon, *Slow Violence and the Environmentalism of the Poor*.
[19] Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*.
[20] Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission; Beder, *Power Play: The Fight to Control the World's Electricity*; Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*.
[21] Darling and Hoff, "Investor-Owned Utilities Served 72% of U.S. Electricity Customers in 2017 - Today in Energy - U.S. Energy Information Administration (EIA)."
[22] Angel, "Towards an Energy Politics In-Against-and-Beyond the State"; Angel, "Irregular Connections"; Baker, "Of Embodied Emissions and Inequality"; Baker, Newell, and Phillips, "The Political Economy of Energy Transitions"; Baptista, "'We Live on Estimates'''"; Behrsin, "Rendering Renewable"; Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter"; Harrison, "The Historical–Geographical Construction of Power"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Little Village Environmental Justice Organization, "Coal Plant Shutdown"; McDonald, *Electric Capitalism*; Silver, "Disrupted Infrastructures."
[23] Roberts, "The Key to Tackling Climate Change"; Sterchele, Palzer, and Henning, "Electrify Everything?"
[24] Bridge et al., "Geographies of Energy Transition"; Calvert, "From 'Energy Geography' to 'Energy Geographies'"; Huber and McCarthy, "Beyond the Subterranean Energy Regime?"
[25] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*; Evans and Phelan, "Transition to a Post-Carbon Society"; Healy and Barry, "Politicizing Energy Justice and Energy System Transitions"; Heiman and Solomon, "Power to the People"; Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*; Newell and Mulvaney, "The Political Economy of the 'Just Transition'"; Roberts, "Power Utilities Are Built for the 20th Century. That's Why They're Flailing in the 21st."; Smith and Tidwell, "The Everyday Lives of Energy Transitions"; Vadari, "The Future of Distribution Operations and Planning."
[26] Harvey, *The Limits to Capital*.
[27] McCarthy, "A Socioecological Fix to Capitalist Crisis and Climate Change?"
[28] Bivens, "A Comprehensive Analysis of the Employment Impacts of the EPA's Proposed Clean Power Plan."
[29] Herod, "From a Geography of Labor to a Labor Geography"; Herod, *Organizing the Landscape*; Herod, *Labor Geographies: Workers and the Landscapes of Capitalism*.
[30] For exceptions see Ekers and Loftus, "Revitalizing the Production of Nature Thesis"; Guthman, "Bodies and Accumulation"; Holmes, *Fresh Fruit, Broken Bodies: Migrant Farmworkers in the United States*; Smith, *Uneven Development: Nature, Capital, and the Production of Space*.
[31] see McCarthy, "A Socioecological Fix to Capitalist Crisis and Climate Change?"
[32] Fairchild and Weinrub, *Energy Democracy*, x.
[33] Fairchild and Weinrub, 6.
[34] Fairchild, "Conclusion: Building an Energy Democracy Movement."
[35] Ransby, *Ella Baker and the Black Freedom Movement*, 368–269.
[36] Kim, Kirsch, and Reyes, "Making Green Work: Best Practices in Green-Collar Job Training"; Johnson and Lewis, "Organizing for Energy Democracy in Rural Electric Cooperatives"; Smith, "Equity Matters."
[37] Singh, *Black Is a Country: Race and the Unfinished Struggle for Democracy*, 6. For a discussion of the international influence on anti-poverty programs, see also: Goldstein, *Poverty in Common*.

[38] Singh, *Black Is a Country: Race and the Unfinished Struggle for Democracy*, 68.
[39] Jones, *The Green Collar Economy: How One Solution Can Fix Our Two Biggest Problems*; Knuth, "Whatever Happened to Green Collar Jobs?"; Pinderhughes, "Green Collar Jobs: An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for Men and Women with Barriers to Employment."
[40] Hall, "Gramsci and Us," 168.
[41] Sunrise Movement, "About"; "Power Shift Convergences." The most recent call for green jobs that I have seen was in the proposal for a Green Stimulus to Rebuild Our Economy in response to the COVID-19 outbreak calls for an "ambitious Green Stimulus of at least $2 trillion that creates millions of family-sustaining green jobs, lifts standards of living, accelerates a just transition off fossil fuels, ensures a controlling stake for the public in all private sector bailout plans, and helps make our society and economy stronger and more resilient in the face of pandemic, recession, and climate emergency in the years ahead." This is only the most recent example of numerous green jobs programs proposed in cities, states, and countries across the world following a Green Keynesian model. See: Bozuwa et al., "A Green Stimulus to Rebuild Our Economy."
[42] "Barack Obama 2008."
[43] Laclau and Mouffe, *Hegemony and Socialist Strategy*.
[44] Barbash and Siegel, "Van Jones Resigns amid Controversy"; Lee, "Van Jones to CEQ."
[45] United Nations Environment Programme, "Global Green New Deal Policy Brief."
[46] Hall and Massey, "Interpreting the Crisis," 70.
[47] Ocasio-Cortez, "Text - H.Res.109 - 116th Congress (2019-2020)"; Shearer, Jobs and Prices in the West Coast Region.
[48] Cooper, *Family Values*; Woods, *Development Drowned and Reborn*.
[49] California Energy Commission, "The California Clean Energy Jobs Act Proposition 39 (K-12) Program"; New York State, "Governor Cuomo Announces Green New Deal Included in 2019 Executive Budget"; "Green New Deal VA."
[50] A Green New Deal for Virginia was adopted as I was working on this dissertation. New Orleans is another important exception to this characterization. Following Hurricane Katrina in 2005, federal aid and foundation monies flowed into the city to address urban resilience and implement solar energy. Community organizing has responded to demand that climate and environmental policy do not contribute to on-going gentrification and displacement of Black, Indigenous, migrant, and low-income residents. See: Luke and Heynen, "Community Solar as Energy Reparations: Abolishing Petro-Racial Capitalism in New Orleans"; Pinchon Battle et al., "Gulf South for a Green New Deal Policy Platform"; Simmons, "Justice Mocked"; Woods, "Les Misérables of New Orleans: Trap Economics and the Asset Stripping Blues, Part 1"; Woods, *Development Drowned and Reborn*. Clean energy investment and efforts to grow green jobs have emerged in a patchwork across much of the rest of the Southeast. For example, North Carolina is a nationwide leader in solar energy production given the state's aggressive renewable portfolio standard. See: Smith and Owens, "5 Reasons For North Carolina's Rapid Emergence As A Solar Energy Leader.".
[51] Pinchon Battle et al., "Gulf South for a Green New Deal Policy Platform," 6.
[52] Pinchon Battle et al., "Gulf South for a Green New Deal Policy Platform"; See also Katz, "Bad Elements"; Keegan, "'Black Workers Matter.'"
[53] Fairchild and Weinrub, *Energy Democracy*.
[54] Sierra Club, "100% Commitments in Cities, Counties, & States."
[55] City of Atlanta, "Resilient Atlanta: Actions to Build an Equitable Future," 5.
[56] Brown, "Low-Income Energy Burdens in the Southeast: Solutions through Community, Business, and Policy Engagement"; Drehobl and Ross, "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities."
[57] Bayor, *Race and the Shaping of Twentieth-Century Atlanta*; Brown-Nagin, *Courage to Dissent*; Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*; Rutheiser, *Imagineering Atlanta*; Stone, *Regime Politics*.
[58] Bluestone and Harrison, *The Deindustrialization of America*, 182; Foster and Lu, "Atlanta Ranks Worst in Income Inequality in the U.S."
[59] City of Atlanta Mayor's Office of Resilience, "Clean Energy Atlanta: A Vision for a 100% Clean Energy Future."
[60] Tadiar, "Life-Times of Disposability within Global Neoliberalism."
[61] Participant observation, September 26, 2019

[62] Hall and Massey, "Interpreting the Crisis."
[63] Moore, *Suffering for Territory: Race, Place, and Power in Zimbabwe*, 11. While hegemony is elusive and impermanent, through state and civil society institutions, ideological forms gain "practical, everyday" purchase as "common sense," creating "the terrain on which men move, acquire consciousness of their position, struggle, etc." Hall, "Gramsci's Relevance for the Study of Race and Ethnicity," 20.
[64] *Demonic Grounds: Black Women and the Cartographies of Struggle*, xxxi.
[65] Interview 35, September 2019; McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism"; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*.
[66] Gilmore, "What Is to Be Done?"; Hall and Massey, "Interpreting the Crisis"; Massey, "When Theory Meets Politics."
[67] Mann, "What's a Penny Worth?"; Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*.

Notes to Chapter 2
[1] City of Atlanta Mayor's Office of Resilience, "Clean Energy Atlanta: A Vision for a 100% Clean Energy Future."
[2] Participant observation, August 21, 2018
[3] Another energy justice organizer who I interviewed later said of the Atlanta 100% clean energy plan that it's not equitable without an achievement plan; Interview 4, April 2019.
[4] Gilmore, "Fatal Couplings of Power and Difference," 16.
[5] Cowen, "Following the Infrastructures of Empire."
[6] Mann, "Value after Lehman"; Robertson and Wainwright, "The Value of Nature to the State."
[7] Gramsci, *Selections from the Prison Notebooks*, 244. State action comprises both coercive, political power such as the police and judicial system and the use of hegemony though educative, moral, and intellectual leadership that extends beyond formal institutions of government into civil society Hall, "Gramsci's Relevance for the Study of Race and Ethnicity." This does not mean that the state is simply a tool of the capitalist class, but rather a site of contest, that Gramsci terms the "war of position," in which the dominant class, works to win the support or consent of others, often through contradictory appeals to political, economic, and ideological perspectives. Writing around the same time, Du Bois identifies the powerful appeal of what he terms the "American Assumption" that unified poor whites, Southern planters, and Northern industrialists in the pursuit of wealth. This complex social formation that comprises the expansive institutions and diverse groups that articulate in an often-contradictory formation is a "historical bloc." See also: Hall, "The 'Base and Superstructure' Metaphor"; Hall and Massey, "Interpreting the Crisis"; Woods, *Development Arrested: The Blues and Plantation Power in the Mississippi Delta*; Woods, *Development Drowned and Reborn*.
[8] Hall, "The 'Base and Superstructure' Metaphor," 163–70.
[9] Freeberg, *The Age of Edison*; Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*; Hyman, *America's Electric Utilities: Past, Present, and Future*; Pinkus, *Fuel: A Speculative Dictionary*; Smil, *Energy: A Beginner's Guide*.
[10] Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940*, 156.
[11] Smil, *Energy: A Beginner's Guide*, 103–4.
[12] Pinkus, *Fuel: A Speculative Dictionary*, 1.
[13] Huber, "Energizing Historical Materialism"; Huber, "Fossilized Liberation: Energy, Freedom, and the 'Development of the Productive Forces.'"
[14] Bellamy and Diamanti, *Materialism and the Critique of Energy*; Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*; Szeman, "System Failure."
[15] Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, 325.
[16] The transition to standardized units of time as a social mediation of the value form simultaneously depends upon and drives the emergence of distinct technologies, such as the clock, steam-powered machines, artificial illuminants, and urbanization. Importantly, Postone notes that the "'progress' of abstract time" is not trans-historical, but "is closely tied to the 'progress' of capitalism as a form of life." Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 213. See also: Castree, "The Spatio-Temporality of Capitalism"; Crary, *24/7*; Melbin, "Night As Frontier"; Thompson, "Time, Work-Discipline and Industrial Capitalism."

[17] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 202.
[18] Postone, 189.
[19] Marx, *Capital: A Critique of Political Economy, Volume I*, 129.
[20] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 25.
[21] Postone, 182.
[22] Katz, "Vagabond Capitalism and the Necessity of Social Reproduction."
[23] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 191.
[24] Postone, 28.
[25] For instance, Dipesh Chakrabarty, who similarly engages questions of time in Marxist historiography asserts that the abstract categories of value, capital, and labor are composed of heterogenous experiences and perspectives. Analyses of time must account for difference, which "is not something external to capital. Nor is it something subsumed into capital. It lives in intimate and plural relationships to capital." Chakrabarty, *Provincializing Europe*, 66; Blaut, *The Colonizer's Model of the World*; Coulthard, *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*; Davis, *Women, Race & Class*; Du Bois, *Black Reconstruction in America, 1860-1880*; Estes, *Our History Is the Future*; James, *The Black Jacobins*; Mies, *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour*; Postone, "Marx's Capital after 150 Years"; Spivak, "Scattered Speculations on the Question of 'Value'"; Williams, *Capitalism and Slavery*.
[26] Hall, "Gramsci's Relevance for the Study of Race and Ethnicity."
[27] Robinson, *Black Marxism: The Making of the Black Radical Tradition*; see Bhattacharyya, *Rethinking Racial Capitalism*; Bledsoe, McCreary, and Wright, "Theorizing Diverse Economies in the Context of Racial Capitalism"; Daigle and Ramírez, "Decolonial Geographies"; De Lara, *Inland Shift*; Kelley, "What Did Cedric Robinson Mean by Racial Capitalism?"; Pulido, "Flint, Environmental Racism, and Racial Capitalism"; Ranganathan, "Thinking with Flint."
[28] Lowe, *The Intimacies of Four Continents*, 149–50; see also Hall, "Race, Articulation, and Societies in Structured Dominance."
[29] Carby, "White Woman Listen! Black Feminism and the Boundaries of Sisterhood"; Collins, *Black Feminist Thought*; Davis, *Women, Race & Class*; Combahee River Collective, "The Combahee River Collective Statement"; Crenshaw, "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics"; McKittrick, *Demonic Grounds: Black Women and the Cartographies of Struggle*; Ransby, *Ella Baker and the Black Freedom Movement*.
[30] Mies, *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour*; Spivak, "Scattered Speculations on the Question of 'Value'"; Tadiar, *Things Fall Away*.
[31] Byrd, *Transit of Empire: Indigenous Critiques of Colonialism*, xxiii. In an important intervention on energy and slavery, Myles Lennon posits that the plantation was "a material landscape organized in ways that maximized the profitable transformation of matter," and enslaved people fit into the plantation economy as a form of "industrialized energy – mechanized work that fuels commercial society – [which] was traditionally rooted in an anthropocentric white supremacy that debased matter, nature, and non-white bodies in intersecting ways." He observes that chattel slavery was distinct from other applications of muscle power in its organization through racial difference. This system required racial hierarchies to justify the taking of Indigenous land and the forced import of enslaved African people through the trans-Atlantic slave trade. Lennon, "Decolonizing Energy," 24, 25.
[32] Coronil, *The Magical State: Nature, Money, and Modernity in Venezuela*, 5; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; see also Estes, *Our History Is the Future*; Estes and Dhillon, *Standing with Standing Rock*; Stanley, "Wasted Life"; Watts, "A Tale of Two Gulfs."
[33] Marx, *Capital: A Critique of Political Economy, Volume I*, 719.
[34] Mitchell, Marston, and Katz, "Life's Work."
[35] Bhattacharya, *Social Reproduction Theory: Remapping Class, Recentering Oppression*; Meehan and Strauss, *Precarious Worlds: Contested Geographies of Social Reproduction*.
[36] Fortunati, *Arcane of Reproduction*, 42.
[37] Marx, *Capital: A Critique of Political Economy, Volume I*, 128. He goes on to define homogenous human labour as "human labour-power expended without regard to the form of its expenditure" representing "phantom-like objectivity," measured in time.
[38] Fortunati, *Arcane of Reproduction*; McDowell, *Working Bodies: Interactive Service Employment & Workplace Identities*.

[39] Davis, *Women, Race & Class*
[40] Cooper, *Family Values*.
[41] Federici, *Revolution at Point Zero: Housework, Reeproduction, and Feminist Struggle*.
[42] Harvey, "The Body as an Accumulation Strategy," 413.
[43] Lowe, *The Intimacies of Four Continents*, 11. Lowe goes on to question the usefulness of Marx's categories of labor and value based in the mines and factories of 19th century Britain that exclude other forms of non-waged labor, which developed concomitantly with wage labor in Britain, although, not measured in the length of hours or working day. Lowe argues that "By positioning slavery as external or prior to capitalism, not integral to it, the Marxist critique of capitalism is unable to grasp the complex combination of both waged and unwaged labor that makes up relations of production in modern capitalism. When privileging industrialized Europe and North America as the sites of mature capitalism, Marxism not only fails to recognize slave labor as labor, but it denies the role of slavery as the formative condition for wage labor and industrialization, over against which 'free labor' was posed" (p. 149). In this interpretation, the very categories of "free" labor for political economists, including Marx, who identified that workers were "doubly free" in being dispossessed of the means of production (i.e. no longer attached to land) and able to sell their labor power, come to be defined in contrast to the systems of "unfree" labor exploitation that others working under conditions of chattel slavery, serfdom, and colonial rule faced.

At the inception of fossil fuel use, as Timothy Mitchell chronicles, the energy system both relied on and reinforced colonization and imperialism that "secured the extensive, solar-based production used to supply agricultural goods in quantities that allowed the development of intensive, coal-based mass production in the towns and cities of Europe." Mitchell, *Carbon Democracy: Political Power in the Age of Oil*, 17. As fossil fuel use reduced socially-necessary labor time in accelerating the pace of production in Britain's textile mills, greater agricultural outputs were demanded from enslaved workers in the Americas and farmers working within reorganized private property relations to sell commodity crops under colonial regimes in India and Egypt. Marx observes these interconnections without recognizing the work performed by enslaved and colonized people as labor. For instance, he draws a connection between mechanization, enslaved workers in the Americas, and unemployed workers in England in his discussion of the relationship between the ratio of constant capital (machinery, physical infrastructures of production, and raw materials) to variable capital (labor) employed in production. In *Capital, Volume I*, he observes that this ratio

> varies considerably with the extent to which machinery has already penetrated, or is engaged in penetrating, those trades. The number of men condemned to work in coal and metal mines has been enormously swollen by the progress of machine production in England, although the growth in numbers has been slowed down during the last few decades by the introduction of new machinery to the mining industries. Along with the machine, a new type of worker springs to life: the machine-maker. We have already learnt that machinery is seizing control even of this branch of production on an ever-increasing scale. As to raw materials, there can be no doubt that the rapid advance of cotton spinning not only promoted as if in a hot house the growing of cotton in the United States, and with it the African slave trade, but also made slave-breeding, the chief business of the so-called border slave states (p. 571).

While acknowledging the relationship between enslaved people and wage workers across the Atlantic, Marx restricts value producing labor to that performed by wage workers and obscures the connections of millworkers to enslaved women. Lowe's work is important in not only highlighting these connections between different labor regimes, but the forms of solidarity that emerged between colonized and enslaved people differently positioned within racial capitalism. See Chapters Two and Five, Lowe, *The Intimacies of Four Continents*; see also Singh, "On Race, Violence, and 'So-Called Primitive Accumulation.'"
[44] See Marx, *Grundrisse: Foundations of the Critique of Political Economy,* 690-712.
[45] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, in particular see Chapter 9, The trajectory of production.
[46] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 191, 333.
[47] In some ways this argument dovetails with critical analyses of the "human capital" thesis that describe the economization of life under neoliberalism. Wendy Brown describes this phase of the division of labor as distinctive in transforming political and labor relations because "neoliberal rationality remakes the human being as human capital," who is forced to compete within and outside the workplace to constantly enhance their worth (p.34). Labor is transformed from Marx's theorization of the "free" worker who sells her labor, which is the source of value under the capitalist mode of production such that Brown dismisses the categories of labor and class as no long relevant for "as labor rendered as a commodity transmogrifies

into labor rendered as self-investing human capital" (p.48) All aspects of life become part of the equation of self-valorizing capital. See: Brown, *Undoing the Demos: Neoliberalism's Stealth Revolution*.

Many have pushed back against the "human capital" conception of labor, and Brown's critique of it in particular, for offering a universalizing narrative that does not account for the diverse forms of labor that people do and have engaged in across the world. Lowe suggests a more nuanced theorization that accounts for racial, gender, colonial, and geographic difference is necessary in analyzing the transformation of labor as human capital – a human source of capital, which is itself value in motion – given the historical context of "the commodification of human life within slavery, colonialism, as well as contemporary globalization." She continues that from this perspective, "we can appreciate that what is currently theorized as the financialization of life as 'human capital' in neoliberalism brutally and routinely occurred and continues to occur throughout the course of modern empires." See *The Intimacies of Four Continents*, 197. For Lowe, the transformation of labor relations theorized by scholars of neoliberalism in which individuals make calculated investments to increase their earning potential cannot be separated from labor conditions of unfree or coerced labor in which life itself was commoditized. From this perspective, neoliberalism in the United States must be examined as a permutation of longer historical phenomenon of racial capitalism in which not only wage labor, but life, becomes productive of value. Du Bois also identifies deeper roots to this conceit of personal investment in one's commercial and financial success as the guiding ideology of U.S. exceptionalism, the American Assumption, that understands "wealth is mainly the result of its owner's effort and that any average worker can by thrift become a capitalist." The notion of human capital accumulation or "that any American could be rich if he wanted to, or at least well-to-do… stubbornly ignored the exceptional position of a freed slave." See: Du Bois, *Black Reconstruction in America, 1860-1880*, 601–2. For longer periodizations of neoliberalism rooted in racial and colonial politics see: Hall and Schwarz, "State and Society, 1880-1930," 120; McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism"; Woods, *Development Arrested: The Blues and Plantation Power in the Mississippi Delta*; Woods, *Development Drowned and Reborn*.

A related line of critique from feminist theorists further posit that any thesis of human capital accumulation must be considered within the context of a global division of labor and the on-going extraction of social reproductive labor from the Global South as migrants and Black and Latinx workers in the U.S. perform much of the social reproductive labor that makes the human capital investments of a particular class of workers possible. Tadiar argues that "time is value productive. Such value-productive time is inextricable from the abstraction of human life. For neoliberal subjects, life is indistinguishable from labor; therefore the time of labor is the value-productive time of life. However, while for the neoliberal subject as entrepreneur of his/her own life (as capital) one's own time is value productive, for the investor, it is the time of others, the time of nonsubjects (their promised labor-time as embodied in the debts they take out or that is taken out on their behalf by their representative state), that can be bet upon or expended now for the extraction of value." See: Tadiar, "Life-Times of Disposability within Global Neoliberalism"; see also Atanasoski and Vora, "Surrogate Humanity"; McClanahan, "Becoming Non-Economic: Human Capital Theory and Wendy Brown's Undoing the Demos"; McClanahan, "Serious Crises"; Mullings, "Neoliberalization, Social Reproduction and the Limits to Labour in Jamaica"; Vora, "Limits of 'Labor.'"

[48] Glenn, "From Servitude to Service Work: Historical Continuities in the Racial Division of Paid Reproductive Labor," 37; see also Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*; Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*.

[49] Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, 335–39.

[50] Salzinger, *Genders in Production: Making Workers in Mexico's Global Factories*; Wright, *Disposable Women and Other Myths of Global Capitalism*.

[51] Dalla Costa and James, "The Power of Women and the Subversion of the Community"; Davis, *Women, Race & Class*; Marshall, *Labor in the South*; Rodriguez, "Rapid Transit and Community Power"; Self, *American Babylon: Race and the Struggle for Postwar Oakland*; Singh, *Black Is a Country: Race and the Unfinished Struggle for Democracy*; Sugrue, "Affirmative Action from Below"; Windham, *Knocking on Labor's Door: Union Organizing in the 1970s and the Roots of a New Economic Divide*.

[52] Cooper, "Workfare, Familyfare, Godfare," 645.

[53] Cooper and Waldby, *Clinical Labor*; Vora, "Limits of 'Labor.'"

[54] Cooper, "Workfare, Familyfare, Godfare," 646.

[55] Du Bois, *Black Reconstruction in America, 1860-1880*, 585; see also De Lara, *Inland Shift*; Gutelius, "Disarticulating Distribution."
[56] Strauss, "Labour Geography III."
[57] Tadiar, *Things Fall Away*, 11.
[58] Tadiar, 13.
[59] Her theorization from the standpoint of living labor is somewhat at odds with Postone who rejects an interpretation of Marx's work as authored from the standpoint of labor and instead considers the domination of abstract social structures. I understand Tadiar's argument here to relate to "standpoint theory" developed by feminists to assert that all knowledge is partial and interrogate universalizing forms without room for difference. Taking up the perspective of a third world feminist critique in conversation with Marxist scholarship, Tadiar sheds light on temporalities not always considered within Anglo-American scholarship. See: Collins, *Black Feminist Thought*; Haraway, "Situated Knowledges"; Hartsock, "The Feminist Standpoint: Developing the Ground for a Specifically Feminist Historical Materialism."
[60] Lowe, *The Intimacies of Four Continents*, 21.
[61] Tadiar, "Life-Times of Disposability within Global Neoliberalism," 29; see also Atanasoski and Vora, "Surrogate Humanity"; Gidwani and Ramamurthy, "Agrarian Questions of Labor in Urban India"; Mullings, "Neoliberalization, Social Reproduction and the Limits to Labour in Jamaica"; Vora, "Limits of 'Labor.'"
[62] "Life-Times of Disposability within Global Neoliberalism," 29–30.
[63] See also Bakker and Gill, *Power, Production and Social Reproduction: Human In/Security in the Global Political Economy*; Pulido, "Flint, Environmental Racism, and Racial Capitalism"; Pulido, Kohl, and Cotton, "State Regulation and Environmental Justice."
[64] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 25.
[65] Singh, "On Race, Violence, and 'So-Called Primitive Accumulation,'" 55.
[66] Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*, 28; Pulido, "Flint, Environmental Racism, and Racial Capitalism"; Pulido, "Geographies of Race and Ethnicity II."
[67] Pulido, Kohl, and Cotton, "State Regulation and Environmental Justice," 26.
[68] Hayes et al., "Coal Blooded Action Toolkit: NAACP Environmental and Climate Justice Program"; Hendryx, "Poverty and Mortality Disparities in Central Appalachia: Mountaintop Mining and Environmental Justice"; Hendryx and Ahern, "Mortality in Appalachian Coal Mining Regions"; Hendryx et al., "Self-Reported Cancer Rates in Two Rural Areas of West Virginia with and Without Mountaintop Coal Mining"; Luke, *Anthropocene Alerts*; Mulvaney, "Are Green Jobs Just Jobs?"; Mulvaney, *Solar Power*; Stanley, "Wasted Life."
[69] Pulido, "Geographies of Race and Ethnicity II," 529; see also Kurtz, "Acknowledging the Racial State."
[70] Dillon, "Race, Waste, and Space"; Gidwani and Reddy, "The Afterlives of 'Waste'"; Pulido, "Flint, Environmental Racism, and Racial Capitalism"; Stanley, "Wasted Life"; Tadiar, "Life-Times of Disposability within Global Neoliberalism"; Wright, *Disposable Women and Other Myths of Global Capitalism*; Yates, "The Human-As-Waste, the Labor Theory of Value and Disposability in Contemporary Capitalism."
[71] Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*.
[72] Collard and Dempsey, "Capitalist Natures in Five Orientations"; Huber, "Value, Nature, and Labor"; Kay and Kenney-Lazar, "Value in Capitalist Natures: An Emerging Framework"; Kenney-Lazar and Kay, "Value in Capitalist Natures."
[73] Robertson and Wainwright, "The Value of Nature to the State."
[74] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 311.
[75] Robertson and Wainwright, "The Value of Nature to the State," 901.
[76] For exceptions see Ekers, "The Political Ecology of Hegemony in Depression-Era British Columbia, Canada"; Ekers and Loftus, "Revitalizing the Production of Nature Thesis"; Gidwani and Chari, "Geographies of Work"; Guthman, "Bodies and Accumulation"; Mazer, "Making the Welfare State Work for Extraction"; Smith, "Scholar Activist Praxis in the Political Ecologies of Appalachia (Panel)."
[77] Ekers and Loftus, "Revitalizing the Production of Nature Thesis," 241.
[78] Heynen, "Urban Political Ecology I."
[79] Blaikie and Brookfield, *Land Degradation and Society*; Moore, Pandian, and Kosek, "Introduction. The Cultural Politics of Race and Nature: Terrains of Power and Practice."; Rocheleau, Thomas-Slayter, and Wangari, *Feminist Political Ecology: Global Issues and Local Experiences*.

[80] Harvey, *Justice, Nature, and the Geography of Difference*; Harvey, *Social Justice and the City*; Lefebvre, *The Production of Space*; Smith, *Uneven Development: Nature, Capital, and the Production of Space*; Williams, *The County and the City*.
[81] Harvey, *Justice, Nature, and the Geography of Difference*, 186.
[82] Swyngedouw, "The City as a Hybrid: On Nature, Society and Cyborg Urbanization," 68.
[83] On water see Bakker, *Privatizing Water: Governance Failure and the World's Urban Water Crisis*; Gandy, *Concrete and Clay: Reworking Nature in New York City*; Kaika, *City of Flows: Modernity, Nature, and the City*; Loftus, "Working the Socio-Natural Relations of the Urban Waterscape in South Africa"; Swyngedouw, "Power, Nature, and the City. The Conquest of Water and the Political Ecology of Urbanization in Guayaquil, Ecuador"; On food and hunger see Alkon and McCullen, "Whiteness and Farmers Markets"; Guthman, *Weighing In: Obesity, Food Justice, and the Limits of Capitalism*; Heynen, "Justice of Eating in the City: The Political Ecology of Urban Hunger"; Heynen, "Bending the Bars of Empire from Every Ghetto for Survival"; Slocum, "Thinking Race through Corporeal Feminist Theory"; On greenspace see Heynen, Perkins, and Roy, "Failing to Grow 'Their' Own Justice?"; Heynen, "The Political Ecology of Uneven Urban Green Space"; Safransky, "Greening the Urban Frontier"; On electricity see Angel, "Irregular Connections"; Baker, "Of Embodied Emissions and Inequality"; Baptista, "'We Live on Estimates'''"; Baptista, "Electricity Services Always in the Making"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Silver, "Disrupted Infrastructures."
[84] Angelo and Wachsmuth, "Urbanizing Urban Political Ecology"; Collard, "Cougar - Human Entanglements and the Biopolitical Un/Making of Safe Space"; Collard and Dempsey, "Capitalist Natures in Five Orientations"; Heynen, "Urban Political Ecology I."
[85] Brahinsky, Sasser, and Minkoff-Zern, "Race, Space, and Nature"; Finney, *Black Faces, White Spaces: Reimagining the Relationship of African Americans to the Great Outdoors*; Heynen, "Urban Political Ecology II"; Heynen, "Urban Political Ecology III"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Mollett and Faria, "Messing with Gender in Feminist Political Ecology"; Nightingale, "Bounding Difference"; Nishime and Williams, *Racial Ecologies*; Safransky, "Greening the Urban Frontier"; Sasser, "From Darkness into Light"; Pulido, Kohl, and Cotton, "State Regulation and Environmental Justice"; Wright, "As Above, So Below."
[86] Di Chiro, "Living Environmentalisms"; Doshi, "Embodied Urban Political Ecology"; Heynen, Hossler, and Herod, "Surviving Uneven Development."
[87] Guthman, *Weighing In: Obesity, Food Justice, and the Limits of Capitalism*; Guthman and Mansfield, "The Implications of Environmental Epigenetics"; Holmes, *Fresh Fruit, Broken Bodies: Migrant Farmworkers in the United States*; Jarvie, "After Years Underground, a Kentucky Coal Miner with Black Lung Faces the Future"; Mazzocchi, "A Decade of Genetic Struggle"; Mayer, "Cross-Movement Coalition Formation." To this end, Katz also writes in *Growing Up Global: Economic Restructuing and Children's Everyday Lives* that "[A]ll modes of production produce and are enabled by particular political ecologies. This fact is so obvious that it often goes unremarked, but the environmental toll of centuries of capitalist production, and its increasingly global nature, has been enormous. The widespread and serious environmental problems that are symptomatic of capitalist relations of production have received plenty of public attention, but not necessarily as problems of social reproduction" (p. 21); see also Harvey, "The Body as an Accumulation Strategy"; Haraway, *Simians, Cyborgs, and Women*; Orzeck, "What Does Not Kill You"; Rioux, "Embodied Contradictions."
[88] Guthman, "Bodies and Accumulation," 237; Ekers and Loftus, "Revitalizing the Production of Nature Thesis"; Smith, "Scholar Activist Praxis in the Political Ecologies of Appalachia (Panel)."
[89] Heynen, Hossler, and Herod, "Surviving Uneven Development," 240.
[90] Pulido, "Flint, Environmental Racism, and Racial Capitalism."
[91] García-Lamarca and Kaika, "'Mortgaged Lives,'" 313.
[92] Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter," vii.
[93] Energy poverty is defined as "a situation in which a household cannot afford to maintain the home's indoor temperature at a level that allows for a comfortable or healthy lifestyle." Harrison and Popke, "'Because You Got to Have Heat'- The Networked Assemblage of Energy Poverty in Eastern North Carolina," 950. For the purposes of clarity throughout this document, I refer to energy burden, which is the term that most advocates and city officials in Atlanta use. High energy burden is related to energy poverty and may prevent a household from being able to meet their indoor cooling and heating needs.

[94] Haraway and Harvey, "Nature, Politics, and Possibilities: A Debate and Discussion with David Harvey and Donna Haraway," 510.
[95] Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Swyngedouw and Heynen, "Urban Political Ecology, Justice and the Politics of Scale."
[96] "Vagabond Capitalism and the Necessity of Social Reproduction."; Massey, "Editorial: Practising Political Relevance"; Osborne, "Public Political Ecology"; Rocheleau, "Political Ecology in the Key of Policy"; Torres, "Everyday Encounters with Activist Scholarship"; Walker, "Political Ecology."
[96] Cocklin, "Environmental Policy," 540.
[97] Cocklin, 540.
[98] Interview 18, June 2019; Interview 25 July 2019
[99] Stoker, "Governance as Theory: FIve Propositions," 18.
[100] Taylor, "Community Participation in the Real World," 314.
[101] Stone, *Regime Politics*.
[102] "Green Subjection," 620.
[103] Bee, Rice, and Trauger, "A Feminist Approach to Climate Change Governance"; Guthman, *Weighing In: Obesity, Food Justice, and the Limits of Capitalism*; Luke, "Caring for the Low-Carbon Self: The Government of Self and Others in the World as a Gas Greenhouse."
[104] Rice, "Climate, Carbon, and Territory."
[105] Long and Rice, "From Sustainable Urbanism to Climate Urbanism," 993; see also Rice et al., "Contradictions of the Climate-Friendly City."
[106] Rice et al., "Contradictions of the Climate-Friendly City"; Rice, "An Urban Political Ecology of Climate Change Governance."
[107] Swyngedouw, "Apocalypse Forever?" 214.
[108] Swyngedouw, "Governance Innovation and the Citizen"; Swyngedouw, "The Antinomies of the Postpolitical City"; Swyngedouw, "Apocalypse Forever?"
[109] Kurtz, "Acknowledging the Racial State"; Pulido, Kohl, and Cotton, "State Regulation and Environmental Justice"; Pulido, "Geographies of Race and Ethnicity II"; Wright, "As Above, So Below."
[110] Woods, *Development Drowned and Reborn*.
[111] Katz, "Bad Elements"; Smith, "There's No Such Thing as a Natural Disaster."
[112] Woods, *Development Drowned and Reborn*, 242.
[113] Bee, Rice, and Trauger, "A Feminist Approach to Climate Change Governance," 3; see also Haraway, "Situated Knowledges"; Seager, "'Radical Housewives' and Other Mad Women: Grassroots Environmental Organizing in the United States."
[114] Bee, Rice, and Trauger, "A Feminist Approach to Climate Change Governance," 9; see also Butler, "Bodies in Alliance and the Politics of the Street"; Derickson and MacKinnon, "Toward an Interim Politics of Resourcefulness for the Anthropocene."
[115] Desbiens, "Producing North and South"; Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*; Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*; Reisner, *Cadillac Desert: The American West and Its Disappearing Water, Revised Edition*; White, *The Organic Machine*.
[116] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; see also Brown, Murphy, and Porcelli, "Ruin's Progeny: Race, Environment and Appalachia's Coal Camp Blacks"; Brown, *Gone Home*.
[117] Harrison, "'Accomplished by Methods Which Are Indefensible'"; Harrison, "Extending the 'White Way'"; Harrison, "Race, Space, and Electric Power."
[118] Harrison and Popke, "'Because You Got to Have Heat'- The Networked Assemblage of Energy Poverty in Eastern North Carolina."
[119] Angel, "Irregular Connections"; Baptista, "'We Live on Estimates'"; Baptista, "Electricity Services Always in the Making"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Silver, "Disrupted Infrastructures"; McDonald, *Electric Capitalism*; Baker, "The Evolving Role of Finance in South Africa's Renewable Energy Sector"; Baker and Phillips, "Tensions in the Transition."
[120] Angel, "Irregular Connections"; Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY."
[121] Du Bois, *Black Reconstruction in America, 1860-1880*, 631. Further, Du Bois argues that with the advent of U.S. imperialism, racial capitalism gained an international form reproduced the world over with

the appropriation of "Surplus Value filched from human beasts which, in cultured lands, the Machine and harnessed Power veil and conceal" (p. 16).

[122] Mitchell, *Carbon Democracy: Political Power in the Age of Oil*, 19. Mitchell argues that the concentration of coal flowing through narrow supply lines gave coal miners, dockworkers, and barge operators enormous political power to make demands for improvements in working conditions and political representation. This labor organizing generated the mass political movements that gave form to the democratic social welfare state in Europe and the United States although the "the democracy they began to achieve was always liable to slip from providing a means of making effective egalitarian claims to offering a means of regulating populations through the provision of their welfare" (p. 26). Mitchell goes on to contrast the forms of "carbon democracy" realized in organic forms of collectivist struggle against the ways in which oil "reorganised fossil-fuel networks … that were to alter the mechanics of democracy" with the imperialist quest for oil and expansion of U.S. forms of corporatist labor organizing following the post-WWII strike wave (p.42). While Mitchell offers a nuanced analysis of the changing forms of labor organizing, it is important to note that the labor movement in the U.S. has always been bifurcated and relied upon a distinction between "craft" and "industrial" labor as seen in the initial division between the American Federation of Labor (AFL) and the Congress of Industrial Organizations (CIO). See for instance Fletcher and Gapasin, *Solidarity Divided: The Crisis in Organized Labor and a New Plan Toward Social Justice*. The 1946 strike wave that Mitchell references as changing labor relations in the oil refining sector also included 400,000 coal workers walking out on the job in one of the biggest labor actions in U.S. history that led to a collective bargaining agreement between the United Mine Workers of America and the Bituminous Coal Operators Association. The United Mine Workers won pensions, health insurance, worker's compensation, and wage increases in exchange for agreeing not to oppose mechanization. See Fox, *United We Stand: The United Mine Workers of America, 1890-1990*. Importantly, John L. Lewis, then President of the Union and an influential labor leader who had organized the Congress of Industrial Organizations, had also led opposition to a national health insurance program in the United States, arguing that "workers could get better plans by unionizing and negotiating with employers," a position also supported by AFL "craft" labor unions. See: Finkel, *COMPASSION: A Global History of Social Policy*, 129; Derickson, "Health Security for All?"; Munts, *Bargaining for Health: Labor Unions, Health Insurance, and Medical Care*. As a result of the agreement with the Bituminous Coal Operators Association, tens of thousands of coal handlers lost their jobs, disproportionately affecting Black workers. Between 1930 and 1968 the share of Black workers in the Appalachian coalfields fell from 22.5% to 6.3%. See: Barnum, "The Negro in the Bituminous Coal Mining Industry"; Brown, *Gone Home*; Lewis, *Black Coal Miners in America: Race, Class, and Community Conflict, 1780-1980*. Appalachian coal workers often migrated to cities and faced related process of dislocation from work with the expansion of electricity-powered automation and migration of "family wage" jobs to the suburbs, Sunbelt, or "offshore." Where Mitchell argues that the social wage was won in the coal mines and supply lines, it is important to note that in the U.S., access the to the social welfare state has always been differentiated based on class, race, gender, and geography.

[123] McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism."

[124] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Harrison, "Race, Space, and Electric Power"; Manganiello, *Southern Water, Southern Power*; Rutheiser, *Imagineering Atlanta*.

[125] Blackmon, *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*; Cater, *Regenerating Dixie: Electric Energy and the Modern South*; LeFlouria, "The Hand That Rocks the Cradle Cuts Cordwood."

[126] The expansion of rail infrastructure was central to this political economic development to bring under control Indigenous territories violently seized in the West and connect Southern agricultural goods to Northern markets. Speculation on rebuilding and constructing new railroads was rampant and bankrupted state governments in the South that underwrote railroad bonds. Graft was blamed on the incompetence of Black politicians and contributed to racist efforts to deprive Black people of political power in both the North and South Du Bois, *Black Reconstruction in America, 1860-1880*, 613, 631–34. In practice, Du Bois observes "the character of the stealing in the South…. was not only in the hands of white men, but Southern white men as often as Northern; and Northern white financial agents and manipulators in Wall Street helped to make the bond sales" in several Southern states (p.616). See also Georgia Writers Project 1973, 162. Where Black politicians were scapegoated, "the leaders of Northern capital and finance" allied with the Southern landholders to offset the South's growing political power that could mean "the reduction of

the tariff, the reduction of monopoly, and an attack upon new financial methods and upon concentrated control in industry…. [In so doing] it did disfranchise black labor with the aid of white Southern labor and with the silent acquiescence of white Northern labor." Du Bois, *Black Reconstruction in America, 1860-1880*, 626.

[127] Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*, 73.

[128] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*, 63.

[129] Hyman, *America's Electric Utilities: Past, Present, and Future*, 4; McDonald, *Electric Capitalism*; Yakubovich, Granovetter, and McGuire, "Electric Charges."

[130] Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission, 23.

[131] Crary identifies the process of electrification as a form of primitive accumulation of the hours of wakefulness under capitalism through encroachment upon sleep. Crary, *24/7*.

[132] Marx, *Capital: A Critique of Political Economy, Volume I*, 367.

[133] Fortunati, *Arcane of Reproduction*.

[134] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 8.

[135] A study produced by NELA in 1907 argued that alternative forms of municipal or public electricity provision were 'socialistic', and a 'threat to democracy' because "public officials were often corrupt and had little management experience. 'And in attempts to maintain low prices, for political reasons, managers might neglect maintenance, refrain from necessary investment in capital equipment, and offer low salaries that would discourage hiring of superior engineers and staff.'" Beder, *Power Play: The Fight to Control the World's Electricity*, 28; Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission, 31.

[136] Du Bois, *Black Reconstruction in America, 1860-1880*, 626.

[137] The New Deal sought to expand electrification through the Tennessee Valley Authority and Rural Electrical Cooperatives that stepped in during the Great Depression to extend powerlines and offer electricity service to farms. Utilities in the South repeatedly sued the federal government to restrict the expansion of public power and ensure that electricity remains a commodity sold through cooperative or corporate venues. Alatout and Schelly, "Rural Electrification as a 'Bioterritorial' Technology"; Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Hughes, *Networks of Power: Electrification in Western Society, 1880-1930*; Taft and Heys, *Big Bets*.

[138] Mann, "Value after Lehman," 185. In the 1980s, changes in federal energy policy allowed states to end the monopoly and monopsony power of regulated utilities. By allowing more people to produce electricity and customers to purchase directly from these new generating sources on the market, regulators imagined prices would fall. Investor owned utilities sold generation facilities to facilitate retail choice, allowing customers to purchase from any provider of their choice. Most customers continue to receive electricity produced by the incumbent utility. Sixteen states have deregulated, however, this process proceeded differently across the U.S. For instance, California witnessed massive spikes in electricity costs as sellers manipulated the market during the Enron scandal, leading to partial re-regulation. Deregulated states are California, Connecticut, the District of Columbia, Delaware, Illinois, Massachusetts, Maryland, Maine, Michigan, Montana, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Texas. See: Beder, *Power Play: The Fight to Control the World's Electricity*; Heiman and Solomon, "Power to the People"; Lambert, *The Power Brokers: The Struggle to Shape and Control the Electric Power Industry*; Solomon and Heiman, "The California Electric Power Crisis"; Zummo, "Retail Electric Rates in Deregulated and Regulated States." In the South, with the exception of Texas, utilities did not deregulate electricity. Electric power continues to be provided in large part by electric cooperatives established during the New Deal and large corporate holding companies that are three of the four largest power providers in the U.S.: Duke Energy, NextEra, and the Southern Company. See: U.S. Energy Information Administration, "State Electric Retail Choice Programs Are Popular with Commercial and Industrial Customers."

[139] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*, 139. Bakke goes on to identify that the terms under which investor-owned utilities operate have changed with the "loss of regulatory support for both monopsony and monopoly powers" because "market forces now matter to the utilities" (p.139).

[140] Interview 35, September 2019; Zummo, "Retail Electric Rates in Deregulated and Regulated States."

[141] Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, 299.

[142] Dickens, *Hard Times*.

[143] Marx, *Grundrisse: Foundations of the Critique of Political Economy*, 692. Marx goes onto to describe that to continue operation, machines consume "coal, oil etc. (matieres instrumentales), just as the worker consumes food, to keep up its perpetual motion. The worker's activity, reduced to a mere abstraction of activity, is determined and regulated on all sides by the movement of the machinery, and not the opposite," (p. 693).
[144] Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*; Rutheiser, *Imagineering Atlanta*.
[145] Harvey, *The Limits to Capital*, 202.
[146] Alatout and Schelly, "Rural Electrification as a 'Bioterritorial' Technology," 134.
[147] Hall, "Race, Articulation, and Societies in Structured Dominance," 340.
[148] Cohen, "Property in Work versus Property in Jobs- A Comment"; Commons, *Legal Foundations of Capitalism*; Gidwani, "Antipode Annual Lecture"; Gomberg, "Featherbedding"; Harris, "Whiteness as Property"; Katz, "In the Long Run We Are All Dead Review"; Quadagno, *The Color of Welfare*; Worsley, "Frantz Fanon and the 'Lumpenproletariat.'"
[149] Chakrabarty, *Provincializing Europe*; Hall, "Race, Articulation, and Societies in Structured Dominance;" Katznelson, *When Affirmative Action Was White*; Quadagno, *The Color of Welfare*.
[150] Hall, "Race, Articulation, and Societies in Structured Dominance," 338.
[151] King, Jr., "Martin Luther King Jr. Speaks with NBC News 11 Months before Assassination."
[152] "Dislocated worker" is the formal term used by the U.S. Department of Labor to identify workers who have been laid off or are about to be laid off. I find the geographic image this term poses to be provocative as it implies that a worker is out of place. To receive this designation, a worker or closing employer must meet specific criteria. See: U.S. Department of Labor, "Dislocated Workers."
[153] See: Peck, "*Workfare*," 138. The construction of the labor market is also discussed in *Capital, Volume I* notably in one instance where Marx analyzes the connections between energy, factory workers in England, and enslaved people in the U.S. during the American Civil War. The changing conditions of labor and trade as enslaved Black workers in the South engaged in a mass strike to abolish slavery cut off the supply of cotton to England's mills and unemployed workers in Lancashire petitioned for permission to immigrate. Marx quotes at length from a debate published in *The Times* over the "manufacturers' manifesto," in which a spokesperson from the Manchester Chamber of Commerce protested immigration and insisted on the retention of skilled labor in England, noting that immigration threatened "exporting the best of its manufacturing population, and destroying the value of some of its most productive capital and enrichment" Marx, *Capital: A Critique of Political Economy, Volume I*, 406. The manifesto posits working people and physical capital as two necessary machineries of production. While physical machines depreciate over time, workers improve with experience and pass on their skills (including discipline under the wage labor regime) to their children. See also: Du Bois, *Black Reconstruction in America, 1860-1880*; Lafer, *The Job Training Charade*; Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*. An editorial published by *The Times* in response rebukes the manufacturers for proposing to manage "'working power'… as they would deal with iron, and coal, and cotton." Marx, *Capital: A Critique of Political Economy, Volume I*, 406-407. While both coal and workers are sources of energy capable of work, *The Times* criticizes the false equivalence between labor and energy as an input into production.
[154] Katz, "Vagabond Capitalism and the Necessity of Social Reproduction," 711.
[155] Du Bois, *Black Reconstruction in America, 1860-1880*, 591.
[156] Gilmore, "Fatal Couplings of Power and Difference."
[157] Ferguson, *Black Politics in New Deal Atlanta*; "Ransom Returns Ready to Launch Big Jobs Program"; "Seven Man Board Named to Handle Relief Activities"; "South as No. 1 Economic Problem Has Advantages, Graves Declares."
[158] Cowie, *The Great Exception*; Katznelson, *When Affirmative Action Was White*; Quadagno, *The Color of Welfare*.
[159] Gilmore, "Fatal Couplings of Power and Difference," 18. Two distinct social supports emerged: welfare authorized minimum benefits for the unemployable, elderly, and mothers with dependent children while unemployment insurance and social security became entitlements for wageworkers.
[160] Singh, *Black Is a Country: Race and the Unfinished Struggle for Democracy*; Windham, *Knocking on Labor's Door: Union Organizing in the 1970s and the Roots of a New Economic Divide*.
[161] Alatout and Schelly, "Rural Electrification as a 'Bioterritorial' Technology," 132.
[162] Neufeld, *Selling Power*, 174–94; Rudolph and Ridley, *Power Struggle*, 73–75.
[163] Beder, *Power Play: The Fight to Control the World's Electricity*.

[164] Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*, 73.
[165] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Cobb, *The Selling of the South: The Southern Crusade for Industrial Development, 1936-1990*; Taft and Heys, *Big Bets*; Wright, *History of the Georgia Power Company, 1855-1956*.
[166] Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*, 78.
[167] Tobey, *Technology as Freedom*, 111.
[168] Coates, "The Case for Reparations."
[169] Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940*.
[170] Hancock, Lazaroff-Puck, and Rutherford, "Getting Practical about the Future of Work."
[171] Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*, 304.
[172] Kremen, "MDTA: The Origins of the Manpower Development and Training Act of 1962"; Mangum, *MDTA: Foundation of Federal Manpower Policy*; Weir, "The Federal Government and Unemployment: The Frustration of Policy Innovation from the New Deal to the Great Society."
[173] Ford, *Architects of Intelligence*, 300.
[174] Autor, "Why Are There Still So Many Jobs?"
[175] Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*, 303.
[176] Cooper, *Family Values*; Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*.
[177] Peck, *Work-Place: The Social Regulation of Labor Markets*.
[178] Autor, "Why Are There Still So Many Jobs?," 17.
[179] Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, 336–39.
[180] Bluestone and Harrison, *The Deindustrialization of America*; Cowie, *Capital Moves*.
[181] Bivens et al., "How Today's Unions Help Working People"; Cowie, *Stayin' Alive: The 1970s and the Last Days of the Working Class*; Strauss, "Labour Geography III."
[182] McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism."
[183] Bertram, *The Workfare State: Public Assistance Politics from the New Deal to the New Democrats*, 7, 6.
[184] Cooper, *Family Values*, 21.
[185] Cooper, 15–16.
[186] Bertram, *The Workfare State: Public Assistance Politics from the New Deal to the New Democrats*; Davis, "Manufacturing Mammies: The Burdens of Service Work and Welfare Reform among Battered Black Women"; Peck, *Workfare States*.
[187] Peck, *Workfare States*, 12, 39.
[188] *Family Values*, 102.
[189] Lafer, *The Job Training Charade*.
[190] Lafer.
[191] Lafer, 5.
[192] Gilmore, "Fatal Couplings of Power and Difference," 21.
[193] Gilmore, "Abolition Geography and the Problem of Innocence."
[194] Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*; Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*; Gilmore, "Abolition Geography and the Problem of Innocence."
[195] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 310.
[196] Marable, "Power to the People?," 13.
[197] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory,* 25.
[198] This idea runs counter to what Postone defines as "traditional" Marxism that focuses on the distributive politics of capitalist production. Under capitalism, a worker sells her labor power applied under average conditions for a wage and from this, her employer extract surplus value, returning to the worker enough to replenish herself, but less than the value of the labor time she expended. Generations of labor organizers have argued that class consciousness can be found in the workplace when workers come to a shared understanding of the theft of surplus value and join together in collective political action. Labor struggle based on the dignity of work and understanding that labor creates all wealth is vitally necessary to address the devaluation of workers and demand improvements to the social reproduction of labor in higher wages, better benefits, and health and safety improvements in the workplace.

[199] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 26.
[200] Gilmore, "Abolition Geography and the Problem of Innocence," 228.
[201] Seale, *Seize The Time: The Story of the Black Panther Party*, 233.
[202] Heffernan, "Jobs for the Environment-The Coming Green Collar Revolution," 134.
[203] Bozuwa et al., "A Green Stimulus to Rebuild Our Economy"; Hall and Massey, "Interpreting the Crisis"; Luke, "A Green New Deal"; Ocasio-Cortez, "Text - H.Res.109 - 116th Congress (2019-2020)"; Platform, "Energy beyond Neoliberalism"; Shearer, "'Green' Economics: Planning with a Political Face."
[204] Mirpuri, Feldman, and Roberts, "Antiracism and Environmental Justice in an Age of Neoliberalism," 405.
[205] *The Hard Road to Renewal: Thatcherism And The Crisis of The Left*.
[206] Hall, "The Neo-Liberal Revolution"; Hall, Massey, and Rustin, *After Neoliberalism?*
[207] Hall, "Gramsci and Us," 169–70.
[208] Baptista, "'We Live on Estimates'''; Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter"; Hilbert and Werner, "Turn up the Heat! Contesting Energy Poverty in Buffalo, NY"; Partnership for Southern Equity, "Just Energy"; Silver, "Disrupted Infrastructures."
[209] McCarthy, "A Socioecological Fix to Capitalist Crisis and Climate Change?"
[210] Laclau and Mouffe, *Hegemony and Socialist Strategy*.
[211] Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter," iii.
[212] Berry, Hronis, and Woodward, "One in Three U.S. Households Faces a Challenge in Meeting Energy Needs - Today in Energy - U.S. Energy Information Administration (EIA)."
[213] Kipfer, "Urbanization, Everyday Life and the Survival of Capitalism," 122.
[214] Fairchild and Weinrub, *Energy Democracy*, 10.
[215] Bayor, *Race and the Shaping of Twentieth-Century Atlanta*; Du Bois, *The Souls of Black Folk*; Ferguson, *Black Politics in New Deal Atlanta*; Griffith, *The Crisis of American Labor: Operation Dixie and the Defeat of the CIO*; Hunter, *To 'joy My Freedom*; Marshall, *Labor in the South*; Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*; Rutheiser, *Imagineering Atlanta*; Wilson, *America's Johannesburg: Industrialization and Racial Transformation in Birmingham*.
[216] Bastien, "Putting Georgia on the Path to Inclusive Prosperity"; City of Atlanta Mayor's Office of Resilience, "Clean Energy Atlanta: A Vision for a 100% Clean Energy Future."

Notes on Chapter 3

[1] Gilmore, "What Is to Be Done?"; Massey, "When Theory Meets Politics"; Woods, *Development Arrested: The Blues and Plantation Power in the Mississippi Delta*; Woods, *Development Drowned and Reborn*.
[2] Ahmed, "White Men"; England, "Getting Personal: Reflexivity, Positionality, and Feminist Research"; Faria and Mollett, "Critical Feminist Reflexivity and the Politics of Whiteness in the 'Field'"; Heynen, "What Harriet Tubman and John Brown Can Teach Us about Abolishing 'White Men'"; Nagar, *Muddying the Waters: Coauthoring Feminisms Across Scholarship and Activism*.
[3] Calvert, "From 'Energy Geography' to 'Energy Geographies,'" 119.
[4] Lennon, "Decolonizing Energy."
[5] Dr. Mildred McClain is Executive Director of the Harambe House, a community and environmental justice organization based in Savannah. Dr. Shalanda Baker is a Professor of Law, Policy, and Urban Affairs at Northeastern University. Becky Rafter was formerly Executive Director of Georgia Women for a New Direction, which advocates for nuclear harm reduction. Leslie Fields is the Director for Environmental Justice and Community Partnerships at the Sierra Club.
[6] "Just Energy." The Partnership for Southern Equity defines energy equity as "the fair distribution of the benefits and burdens of energy production and consumption."
[7] Participant Observation, September 21, 2018
[8] Kelley, "Foreword," xiii.
[9] Bee, Rice, and Trauger, "A Feminist Approach to Climate Change Governance"; Derickson, "Urban Geography I"; Derickson, "Masters of the Universe"; Haraway, "Situated Knowledges"; Hartsock, "The Feminist Standpoint: Developing the Ground for a Specifically Feminist Historical Materialism"; Nagar, *Muddying the Waters: Coauthoring Feminisms Across Scholarship and Activism*.
[10] Werner et al., "Feminist Political Economy in Geography," 3.

[11] Derickson and MacKinnon, "Toward an Interim Politics of Resourcefulness for the Anthropocene"; Osborne, "Public Political Ecology."
[12] Gilmore, "What Is to Be Done?," 264.
[13] Massey, "Ideology and Economics in the Present Moment," 31.
[14] Gilmore, "What Is to Be Done?," 259.
[15] Woods, *Development Arrested: The Blues and Plantation Power in the Mississippi Delta*; Woods, *Development Drowned and Reborn*; see also the intro by Camp and Pulido, "The Dialectics of Bourbonism and the Blues."
[16] Williams, *Marxism and Literature*.
[17] Massey, "Editorial: Practising Political Relevance," 132.
[18] Massey, "When Theory Meets Politics," 495; see also Featherstone et al., "There Is No Point of Departure: The Many Trajectories of Doreen Massey."
[19] Massey, "Ideology and Economics in the Present Moment," 35.
[20] Martinez, "From Commodification to the Commons: Charting the Pathway for Energy Democracy," 27, 30; see also Bulkeley, Edwards, and Fuller, "Contesting Climate Justice in the City"; Fairchild and Weinrub, *Energy Democracy*; Franklin and Osborne, "Toward an Urban Political Ecology of Energy Justice"; Shove and Walker, "What Is Energy For?"; Sovacool et al., "Decarbonization and Its Discontents."
[21] Hall and Massey, "Interpreting the Crisis"; Massey, "Ideology and Economics in the Present Moment"; Ransby, *Ella Baker and the Black Freedom Movement*.
[22] Marable, "Power to the People?"
[23] Participant observation, October 25, 2019
[24] Collins, *Black Feminist Thought*; see also Derickson and MacKinnon, "Toward an Interim Politics of Resourcefulness for the Anthropocene"; Ekers et al., *Gramsci*; Mann, "Should Political Ecology Be Marxist?"
[25] Massey, "When Theory Meets Politics," 496.
[26] Luke et al., "Diversity in California's Clean Energy Workforce"; Jones, Hubbard, and Luke, "San Francisco Bay Area Analysis: Creating Economic Opportunity in Green Infrastructure Investments"; Jones et al., "Working toward Equity in Illinois's Clean Energy Future"; Also contributed research to Jones et al., "California Building Decarbonization: Workforce Needs and Recommendations."
[27] Osborne, "Public Political Ecology," 846.
[28] Pulido, "(PDF) "FAQs."
[29] Nagar et al., "Feminisms, Collaborations, Friendships," 513.
[30] Brown-Vincent, "Seeing It for Wearing It," 111; Hurston, *Mules and Men*.
[31] Nagar et al., "Feminisms, Collaborations, Friendships," 513.
[32] Katz, "Revisiting Minor Theory," 596; see also Faria, "Unsettling the Sediments of Violence"; Katz, "Towards Minor Theory"; Katz, "The Angel of Geography."
[33] The Big Green Environment Groups include the Sierra Club, Environmental Defense Fund, Nature Conservancy, Natural Resources Defense Council, World Wildlife Fund, Greenpeace, and the National Audubon Society among others.
[34] The Sierra Club was founded by John Muir in 1892, who advocated Indigenous removal from California's Sierra mountains to create public parks. The Sierra Club supported population control measures and spoke out against unlawful immigration given the environmental impacts of migrants trying to cross U.S.-Mexico border through the Rio Grande river valle. See for one critique, Wright, "Border Thinking, Borderland Diversity, and Trump's Wall."
[35] Herod, "Reflections on Interviewing Foreign Elites: Praxis, Positionality, Validity, and the Cult of the Insider."
[36] The names of interviewees in this dissertation are pseudonyms to protect the anonymity of participants. I attribute moments observed through participant observation and cite publicly available transcripts or recordings of events where possible.
[37] "Narrative Inquiry: Multiple Lenses, Approaches, Voices."
[38] Wiles, Rosenberg, and Kearns, "Narrative Analysis as a Strategy for Understanding Interview Talk in Geographic Research," 98.
[39] Fischer, *Reframing Public Policy*.
[40] Fischer, *Reframing Public Policy*, 161; McCann and Ward, "A Multi-Disciplinary Approach to Policy Transfer Research."

[41] Ganz, "Public Narrative, Collective Action, and Power," 274; Working Narratives, "Public Narrative / Rappaport Family Foundation."
[42] The practice of engaging narratives and telling stories can be traumatic. At an April 19, 2019 meeting of the Just Energy Circle, organizers discussed outreach through the Southern Christian Leadership Conference to collect personal stories of people's experiences with Georgia Power in advance of the Integrated Resource Plan and rate case proceedings. Chandra from the Partnership for Southern Equity noted that it is traumatic to remember and rehearse financial difficulty. These stories must be used responsibly and mobilized intentionally in connection to continued organizing against injustice that is reproduced through the electric grid. Asking people to tell their stories has to be connected to opportunities for meaningful public engagement to speak their experiences to elected officials or others in power and should always be a personal choice. See also: Nagar, *Muddying the Waters: Coauthoring Feminisms Across Scholarship and Activism*, 94.
[43] Fairchild and Weinrub, *Energy Democracy*, 8.

Notes to Chapter 4
[1] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Kaika, *City of Flows: Modernity, Nature, and the City*; Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*; Wright, *History of the Georgia Power Company, 1855-1956*.
[2] Hunter, *To 'joy My Freedom*; LeFlouria, "The Hand That Rocks the Cradle Cuts Cordwood."
[3] Southern Company, "Planning for a Low-Carbon Future." To attend the meeting, you have to hold stock in the Company. I had a proxy for a group of nuns from New Jersey. The shareholder activism that the Georgia Chapter of the Sierra Club has engaged in thus presents many of the contradictions raised by Sarah Knuth who observes that divestment falls short of fostering new political praxis and focuses instead on market action in which "that targeted product demands a licit market replacement" most likely in the form of "renewable energy and other cleantech industries to replace a staple commodity." Knuth, "Green Devaluation," 109. In other words, shuttering fossil fuel and nuclear projects through investor action may serve to buttress green capitalism both in creating a regulating mechanism within the "free" market to divest from fossil fuel sectors before massive losses are realized and to encourage changes in investment portfolios to capitalize new clean technologies and infrastructures. Shareholder activism and calls for divestment do not call attention to the uneven distribution of shareholder power that leaves few with control over the lives of those that stand to be impacted by climate change. See also: Labban, "Against Value."
[4] Southern Company, "Southern Company - Information for Investors - Financial Information - Webcasts & Presentations."
[5] Rutheiser, *Imagineering Atlanta*, 5.
[6] Gaston, *New South Creed*.
[7] Cobb, *The Selling of the South: The Southern Crusade for Industrial Development, 1936-1990*; Gaston, *New South Creed*; Rutheiser, *Imagineering Atlanta*.
[8] Chakrabarty, "Universalism and Belonging in the Logic of Capital," 670.
[9] Coronil, *The Magical State: Nature, Money, and Modernity in Venezuela*, 6.
[10] Rutheiser, *Imagineering Atlanta*.
[11] McCreary and Milligan, "The Limits of Liberal Recognition," 5.
[12] Doyle, *New Men, New Cities, New South*; Du Bois, *The Souls of Black Folk*; Rutheiser, *Imagineering Atlanta*.
[13] Gaston, *New South Creed*.
[14] Blackmon, *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*; LeFlouria, "The Hand That Rocks the Cradle Cuts Cordwood." Importantly, the first electric railway line was constructed by Joel Hurt, a real estate developer and founder of Atlanta's Trust Company Bank, who faced a state legislative inquiry for the cruelty and mistreatment of workers at the numerous mines he operated that employed convict laborers before convict leasing was abolished in 1909.
[15] Doyle, *New Men, New Cities, New South*, 315.
[16] Doyle.
[17] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 6.
[18] Wright, *History of the Georgia Power Company, 1855-1956*, 22. Wright also notes that the first public utility that Atlanta addressed was a gas works to light the streets of the growing city in 1855. The city

contracted with the Gas Company, which was formally chartered by the state in 1856, for streetlamps in the downtown. The city was the principle stockholder and paid its annual bills to the company in dividend on its stock. The gas works operated until 1864 when it was damaged in General William T. Sherman's siege of the city and turned on again after the war in 1866. In the 1880s, gas usage expanded for cooking as well. However, the city sold all of its stock in the Company by 1887 to build part of Piedmont Park and Georgia Technical College.

[19] See: Du Bois, *Black Reconstruction in America, 1860-1880*.

[20] The Company argued that electrical service "round the clock" was necessary 'because a very large demand has sprung up for light and power during the daylight hours, and this demand cannot be met unless is Company is allowed to give twenty-four hours' service" instead of the 15 hours permitted in its charter. Both the city and Company received praise from the local press for "excellence" in street lighting service. The tight coordination between the electric provider and the city was seen in 1893 when the City of Atlanta "did not have the money to pay its debts or even to meet its payrolls" during a nationwide depression and H. M. Atkinson, the first chairman of the Georgia Power Company, "put his own personal credit and endorsement and that of every company he was interested in, on the city's notes … to obtain for the city the money" Wright, *History of the Georgia Power Company, 1855-1956*, 36.

[21] Blackmon, *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*; Cater, *Regenerating Dixie: Electric Energy and the Modern South*.

[22] Blass, "Midtown Along Peachtree: A Pictorial History"; Hunter, "Living in Atlanta: An Oral History of the City, 1914-1948"; Kuhn, Joye, and West, *Living in Atlanta: An Oral History of the City, 1914-1948*.

[23] Rutheiser, *Imagineering Atlanta*.

[24] Hunter, *To 'joy My Freedom*, 99.

[25] Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*; Reed, "Historic Streetcar Systems in Georgia."

[26] Hunter, *To 'joy My Freedom*.

[27] See: "Alderman Key's Views." Gregory Mixon characterizes monopoly regulation and municipalization in Georgia as part of a populist and later progressive platform to enshrine white supremacy, see Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*, 56-59.

[28] Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*, 95.

[29] Cater, *Regenerating Dixie: Electric Energy and the Modern South*.

[30] Beder, *Power Play: The Fight to Control the World's Electricity*.

[31] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 51. Elected commissions are still regressive actors who have stymied clean energy policy in Georgia and across the South. Elected commissioners are beholden to the political will of the electorate and not necessarily as skilled in the financial and technological in-and-outs of electricity policy as those appointed by either the governor or legislature. As one clean energy advocate in Atlanta who I interviewed observed in 2019, "It's always politics first, what's the political answer? Who cares what the right answer is?" Interview 25, July 2019.

[32] "The Great and Historic Legislature of 1907."

[33] See: Harrison, "Extending the 'White Way'"; Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940*.

[34] Hunter, *To 'joy My Freedom*, 146.

[35] Bayor, *Race and the Shaping of Twentieth-Century Atlanta*; Mixon, *The Atlanta Riot: Race, Class, and Violence in a New South City*.

[36] Bayor, *Race and the Shaping of Twentieth-Century Atlanta*.

[37] Bayor, 189.

[38] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*, 111.

[39] Kuhn, Joye, and West, *Living in Atlanta: An Oral History of the City, 1914-1948*.

[40] Cherup, "Servicemen Slain on Streetcars by Motormen with Guns: A LEgal History and Analysis of the Killings of Veterans Walter Lee Johnson and Madison Harris."

[41] Cherup, "Servicemen Slain on Streetcars by Motormen with Guns: A LEgal History and Analysis of the Killings of Veterans Walter Lee Johnson and Madison Harris"; Ferguson, *Black Politics in New Deal Atlanta*, 311; Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*, 109.

[42] Delk to Georgia Power Company, July 24, 1948; Manager Transportation Department, Georgia Power Company to Jones, April 23, 1946.

[43] Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter"; Ondieki, "Lawsuit Claims Georgia Power Negligent in Death of Henry Resident."

[44] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*, 134, 217. The Securities and Exchange Commission investigated the operations of holding companies under the Public Utilities Holding Company Act of 1935 and required holding companies that were not contiguous to separate as well as sell off assets that were not tied directly to power generation. After intensive litigation in an effort to maintain electric rail service, Georgia Power sold its gas and rail holdings in 1949. The Southern Company was also chartered at this time when the holding company Commonwealth and Southern divested their properties in the South, and Southern Company organized to represent Alabama Power, Georgia Power, Gulf Power, Mississippi Power, and later Southern Services Inc. NextEra Energy, which is the parent company of Florida Power and Light, acquired Gulf Power from the Southern Company in 2018.
[45] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*.
[46] Bayor, *Race and the Shaping of Twentieth-Century Atlanta*; Stone, *Regime Politics*.
[47] Moore, Pandian, and Kosek, "Introduction. The Cultural Politics of Race and Nature: Terrains of Power and Practice.," 3.
[48] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 89–93. The state legislature voted down two measures concerning making electric power generation public in 1918. One measure would have allowed city governments to issue bonds to finance municipal electric infrastructure independent of the private power providers and another that would have put hydropower development under the control of an independent state-level hydroelectric commission.
[49] "Gas and Light Increases Awarded."
[50] Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission, 26.
[51] Wright, *History of the Georgia Power Company, 1855-1956*, 168.
[52] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 88.
[53] Scott and Guynn, "The Atlanta Streetcar Strikes"; Wright, *History of the Georgia Power Company, 1855-1956*.
[54] Taft and Heys, *Big Bets*.
[55] Beder, *Power Play: The Fight to Control the World's Electricity*; Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*.
[56] Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission, 12.
[57] Thompson, *Confessions of the Power Trust: A Summary of the Testimony Given in the Hearings of the Federal Trade Commission on Utility Corporations Pursuant to Resolution No. 83 of the United States Senate Approved February 15, 1928*, 421.
[58] Beder, *Power Play: The Fight to Control the World's Electricity*, 39; Marable, "Power to the People?"
[59] See: Arkwright, Testimony of Preston S. Arkwright Chairman of the Public Policy Committee of the National Electric Light Association before the Federal Trade Commission, 66-67. At the 2019 Southern Company shareholders meeting, which students, parents, and teachers of the Harris County STEM program were invited to attend, Tom Fanning gave a $10,000 check to the instructional coordinator of Harris County schools. He explained that Georgia Power CEO Paul Bowers has hired many principles from the school system onto his staff "to help assure that the message of energy as a positive force in America is reflected appropriately in our education system." As Mr. Fanning explained, Georgia Power and the Southern Company want to support STEM education in any way that they can. Seemingly, the influence on educators from the utility that once drew criticism from the Federal Trade Commission persists.
[60] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*.
[61] Taft and Heys, *Big Bets*, 70.
[62] Wright, *History of the Georgia Power Company, 1855-1956*; Cater, *Regenerating Dixie: Electric Energy and the Modern South*.
[63] Taft and Heys, *Big Bets,* 62.
[64] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*, 291.
[65] Lowe, *The Intimacies of Four Continents*, 21.
[66] Kaika, "Interrogating the Geographies of the Familiar," 270.
[67] Georgia Power Company, "Putting Electricity to Work on Your Farm."
[68] Georgia Power Company, "Along Came Youth."

[69] Georgia Power's advertising campaigns continued through the 20th century and the utility also sought to take market share from Atlanta Gas Light during the 1970s in advertising "fully electric" homes. See: Georgia Power, "History of Georgia Power."
[70] Felder, *A Century of Women*, 15.
[71] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*, 214–15.
[72] Felder, *A Century of Women*, 14.
[73] Hunter, *To 'joy My Freedom*.
[74] See: Felder, *A Century of Women*; Kuhn, Joye, and West, *Living in Atlanta: An Oral History of the City, 1914-1948*. The electrification of reproductive labor did not address segregation that limited the work available to Black women and devalued their time. Dorothy Bolden, who founded the National Domestic Worker's Union of America in Atlanta in 1969 defined the devaluation of Black women's work as directly enriching white households. Value was appropriated through domestic workers who "was helping them to create their money. We was saving them. They was living in luxury. We wasn't." See: Bentley, "Dorothy Bolden"; see also Bolden, Dorothy Bolden oral history interview, 1995-08-31. Tera W. Hunter also describes the economy of time that shaped domestic labor. In particular, women spoke against doing live-in domestic work that required perpetual labor. One woman who Hunter quotes who did work as a live-in servant states that "'You might as well say that I'm on duty all the time—from sunrise to sunrise, every day in the week.' She expressed the familiar feeling of confinement that most black women had historically tried to escape: 'I am the slave, body and soul, of this family'" (p.106).
[75] Garza, "Foreword," v; Boyd, "The Color of Help"; DuMonthier, Childers, and Milli, "The Status of Black Women in the United States."
[76] Federici, *Revolution at Point Zero: Housework, Reeproduction, and Feminist Struggle*; Glynn, "An Unequal Division of Labor"; McDowell, "Life without Father and Ford"; McDowell, *Working Bodies: Interactive Service Employment & Workplace Identities*.
[77] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Hamer, "Urban Perspective for the 1980s"; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*; Taft and Heys, *Big Bets*.
[78] "Georgia Power Company Yearbook," 4.
[79] "Georgia Power Company Yearbook," 55, 35, 51.
[80] Rutheiser, *Imagineering Atlanta*.
[81] Georgia Power Company, "It's Great to Be a Georgian! Year Book 1929." The quality of educational institutions is also emphasized, which as I examine in Chapter Six, continues to be an important selling points so that the ample supply of ready workers can be skilled up as needed. As a workforce development officer described, when the "governor is out marketing the state, he talks about the Technical College System of Georgia, as a benefit to employers trying to move to the area." Interview 36, September 2019.
[82] "Georgia Power Chiefs Preview Film on Poultry."
[83] Marable, "Power to the People?," 13. See also: Harris and Hyden, "Geographies of Resistance Within the Black Belt South"; Woods, *Development Arrested: The Blues and Plantation Power in the Mississippi Delta*.
[84] McLaughlin and Robock, *Why Industry Moves South*, 60.
[85] McLaughlin and Robock, 71.
[86] Eskew, *Labor in the Modern South*; Marshall, *Labor in the South*; Salzinger, *Genders in Production: Making Workers in Mexico's Global Factories*; Wright, *Disposable Women and Other Myths of Global Capitalism*.
[87] McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism"; Wright, *History of the Georgia Power Company, 1855-1956*.
[88] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*; Kromm, "The Racist Roots of 'right to Work' Laws"; Randolph, "Right to Work Laws Called Threat to Decent Wages."
[89] Cobb, *The Selling of the South: The Southern Crusade for Industrial Development, 1936-1990*, 217. Cobb also observes that a survey of fifty-six manufacturers that moved to Mississippi between 1960 and 1970 reported that they would have done so without promotional materials, however, "more than two-thirds of the respondents conceded that tax exemptions were important and nearly as many reveals that the state's start-up training program had been a significant factor in their decisions" (p.219).
[90] Hamer, "Urban Perspective for the 1980s."
[91] Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*.

[92] Hamer, 9.
[93] DiGiacomo, "Sprawling Atlanta Seeks New Routes to the Future"; Bullard, Johnson, and Torres, *Sprawl City*.
[94] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*, 243.
[95] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*; Secrest, "A Solar Power Payoff"; Wright, III, "The Office Market: Central Atlanta vs. Suburbs."
[96] From the inception of the Company, Georgia Power officers had always been interconnected with real estate, railroads, cotton trading, newspapers, coal mines, and banks as either investors or operators in prominent Atlanta firms. See: Doyle, *New Men, New Cities, New South*; Wright, *History of the Georgia Power Company, 1855-1956*.
[97] Marable, "Power to the People?," 8.
[98] The Southern model of economic development also changed national labor standards as companies tried to save on labor costs and moved jobs South. The migration of people to the Sunbelt skewed electoral politics in the process as people moved South and Southern Democrats became Republicans. McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism."
[99] McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism."
[100] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*; McLean, "Southern Dominance in Borrowed Language: The Regional Origins of American Neoliberalism."
[101] U.S. Department of Commerce Bureau of the Census, "Population of Georgia, By Counties, April 1, 1950, 1950 Census of Population Preliminary Counts"; U.S. Department of Commerce Bureau of the Census, "Population of Standard Metropolitan Areas: April 1, 1950, 1950 Census of Population Preliminary Counts"; U.S. Census Bureau, "U.S. Census Bureau QuickFacts"; U.S. Census Bureau, "Counties in South and West Lead Nation in Population Growth."
[102] Orfield and Ashkinaze, *The Closing Door*, 54.
[103] Sjoquist and Pandey, "Changing Face of Atlanta."
[104] Interview 35, August 2019
[105] Questions of time dominate politics in Georgia where the possibility of unseating Republican incumbents is seen as a matter of waiting for the demographic shift to a "minority majority" state. Change might happen, but as questions of voter fraud that swirled around Governor Brian Kemp's victory over Stacey Abrams in Georgia's 2018 gubernatorial election, the regressive control of the GOP works to ensure that is "not yet." Rivera and Prescott, "How Georgia's Changing Demographics Could Influence The 2018 Elections."
[106] Georgia Public Service Commission, "Electric"; Westbury, "Power to the People." New commercial or manufacturing facilities with a demand of more than 900kw that are relocating to Georgia have a one-time opportunity to choose their electric power provider. The Public Service Commission adjudicates any territorial disputes. The Territorial Act was adopted as electricity markets across the U.S. began to change with deregulation in response to the energy crises of the 1970s. While the Territorial Act introduces some "retail choice" for large customers, electricity service in Georgia remains regulated. In 2015, Georgia adopted the Solar Power Free-Market Financing Act in an effort to ease some of the constraints on solar installation that result from the Territorial Act. The measure allows a company to install solar panels on a customer's land or roof and keep ownership of the system, however, solar energy has still been slow to take off. For more on electricity deregulation elsewhere in the U.S., see: Beder, *Power Play: The Fight to Control the World's Electricity*; Heiman and Solomon, "Power to the People"; Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*; Kihm et al., "You Get What You Pay For: Moving Toward Value in Utility Compensation, Part 1, Revenue and Profit"; Solomon and Heiman, "The California Electric Power Crisis."
[107] The City signed a 99-year contract with the Company in 1965. As part of this franchise agreement, Georgia Power pays the city a fee equal to 5% of all revenue generated within city limits for the right to provide power there, which nets the city of Atlanta more than $10 million annually. See: City of Atlanta, "Fiscal Year 2019 Proposed Budget"; Suggs, "Relocation Costs Disputed by City, Utility."
[108] Future I, the model solar home, was built in downtown Atlanta and toured by 100,000 visitors before being auctioned. See: "Developers, Georgia Power to Discuss Energy Policies"; Cowles, "Solar Homes to Close, Be Sold in August"; Johnson, "Solar Income Tax Credit Could Be State Bonanza, Committee Is Told"; Jones, "Industrial Test of Solar Power Begins." See also Chapter 5, Installer Brotherhood pages 147-157.

[109] Anderson, Kasper, and Pomerantz, "Utilities Knew: Documenting Electric Utilities' Early Knowledge and Ongoing Deception on Climate Change From 1968-2017," 6; Triedman et al., "American Utilities and the Climate Change Countermovement: An Industry In Flux."
[110] Interview 25, July 2019
[111] Interview 17, June 2019
[112] Hugh continued in explaining two central issues that I will address in greater detail in Chapter Five and Seven. First, the issue of opening up renewable energy procurement to the market. He noted: "there's a lot of pressure to open up resource procurement to the market to allow developers to bid in and if someone else builds the power plant, and we're seeing this is particularly the case when it comes to building renewables, if a developer comes in or a third party comes in, and builds a solar farm utility scale solar farm, and Georgia Power doesn't own it, well, then the cost of the power purchase agreement, that's just the pass through, they're not earning a profit on it. And so it's a missed opportunity to profit from a capital investment…. One of the ways is you allow the utility to build their renewable assets. So they own it… [but] you also want to open up the market to competition… so you can get the least cost, you know? you allow market forces to deliver the least cost solution, because utilities aren't necessarily going to do that if they're if they have the monopoly on building the generation resources." The question of expanding cheaper renewable energy efficiency resources is twinned to the complex problem of dealing with "stranded assets that are retired before their full cost has been recovered… again, particularly in the South where…we've weaned ourselves off of coal quite a bit, but there still is a good amount of coal on the system, and many of those plants still have economic life left and another not fully depreciated. And so, if you want to retire those plants early so that you can replace that capacity with solar then what do you do? Essentially it becomes a stranded asset and the utility is left holding the bag, so how do you how do you overcome that? There is a lot of work being done right now looking at bonds that the state could issue to basically pay off those stranded assets… There's accelerated depreciation that some state regulators allow to ensure the utilities made whole, so that they don't throw up their arms and try to block early retirement of coal plants and other outdated, inefficient fossil assets." Interview 35, August 2019.
[113] Thoyre, "Energy Efficiency as a Resource in State Portfolio Standards."
[114] Krause, "Commission Adds 2,210 MW of Renewable Energy in Georgia Power 2019 Integrated Resources Plan."
[115] City of Atlanta Mayor's Office of Sustainability, "Power to Change: Atlanta's Citywide Sustainability Initiative."
[116] Fears, "City Warms to Solar Energy Proposals."
[117] Creech, "Empowerment Zone Will Look to the Sun."
[118] Saporta, "Atlanta Rejects Turner Funds for Energy Conservation Plan."
[119] DiGiacomo, "Sprawling Atlanta Seeks New Routes to the Future."
[120] City of Atlanta Mayor's Office of Sustainability, "Power to Change: Atlanta's Citywide Sustainability Initiative."
[121] In 2011, Atlanta singed onto the Better Buildings Challenge to reduce energy and water consumption in commercial buildings by 20% in partnership with Central Atlanta Progress/the Atlanta Downtown Improvement District, Midtown Alliance, Livable Buckhead, and Southface. The city began to benchmark energy usage in all municipal buildings and make the data public as well as electrify its vehicle fleet with the support of Georgia Power. The utility understands vehicle electrification as important to their bottom line given that increasing energy efficiency means that less power will be purchased and electrifying new areas can increase overall demand. The city also signed Energy Savings Performance Contracts with NORESCO, a large engineering firm, to increase energy efficiency of all municipal properties and had worked with a developer to put solar on their buildings. A former city employee described that none of these projects generated the job numbers that "green jobs" programs in the post-recession era had touted. There were more jobs in energy efficiency, an estimated 654 positions were created through the Better Buildings Challenge, which also resulted in the greatest carbon reduction for the City. See: Latimore, "City of Atlanta Meets 'Better Buildings Challenge' Goal 2 Years Ahead of Schedule."
[122] Interview 18, June 2019
[123] Interview 2, April 2019; Interview 7, May 2019; Interview 8, May 2019; Interview 18, June 2019
[124] Despite the resolution, Kwanza Hall lost the 2017 mayoral race to Mayor Keisha Lance Bottoms. See: Green, "Atlanta Leaders Want to Power the City with 100 Percent Clean Energy by 2035. Can It Be Done?"

[125] City of Atlanta Mayor's Office of Resilience, "Clean Energy Atlanta: A Vision for a 100% Clean Energy Future."
[126] Interview 32, August 2019. One airport employee described that when they started to think about emission reduction at the airport, transportation to work for the 63,000-65,000 people who work in and around the airport was a big concern. Executives at Delta, which is headquartered in Atlanta, supported the idea of expanding bus service to bring in Delta employees from the Northern suburbs, "But the interesting thing is, a lot of the people in the Central Terminal are concessions workers, and they don't get paid a lot. And what we have found in a study is they end up getting paid less, but have to pay more percentage of their pay for parking. Whereas a lot of the executives, who make a good amount of money, get free parking. So that's a social inequity that's perpetuated by the airport." Interview 32, August 2019.
[127] Brown, "Low-Income Energy Burdens in the Southeast: Solutions through Community, Business, and Policy Engagement."
[128] Drehobl and Ross, "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities," 19.
[129] Harrison and Popke, "'Because You Got to Have Heat'- The Networked Assemblage of Energy Poverty in Eastern North Carolina."
[130] Berry, Hronis, and Woodward, "One in Three U.S. Households Faces a Challenge in Meeting Energy Needs - Today in Energy - U.S. Energy Information Administration (EIA)"; Drehobl and Ross, "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities," 9.
[131] I examine the reproduction of energy poverty in greater detail in Chapter Seven where I note that Georgia Power often boasts of having some of the lowest electricity *rates* in the U.S., which is the amount charged per kilowatt hour of electricity used. However, when you look at the total bill, which also includes numerous fees for construction at Plant Vogtle, fuel charges, environmental clean-up, and others, Georgia Power's bills are in fact among the highest in the U.S. Utility bills are the number one reason people seek a short-term loan or title loan in Georgia, which, argued Brad, creates a "cycle of poverty" seen also in the correlation between that evictions and areas of high energy burden. Interview 18, June 2019.
[132] Relf et al., "2020 Utility Energy Efficiency Scorecard," 12, 28.
[133] Interview 18, June 2019
[134] Interview 18, June 2019
[135] Participant Observation, September 29, 2018
[136] Interview 18, June 2019
[137] Emerald Cities Collaborative, *Forum Session 1: Voices from the Field*.
[138] Interview 32, August 2019
[139] Fairchild and Rose, "Inclusive Procurement And Contracting: Building a Field of Policy and Practice."
[140] Georgia's minimum hourly wage is $5.15. It is one of four states that has a minimum wage below the federal minimum wage of $7.25 an hour.
[141] von Wilpert, "City Governments Are Raising Standards for Working People—and State Legislators Are Lowering Them Back Down."
[142] Interview 32, August 2019
[143] Interview 35, September 2019
[144] Interview 18, June 2019
[145] Robertson and Wainwright, "The Value of Nature to the State," 901.

Notes to Chapter 5
[1] Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*; See also: Thompson, "Time, Work-Discipline and Industrial Capitalism."
[2] Bowers, Docket No. 42516: Georgia Power Company's 2019 Rate Case.
[3] Georgia Public Service Commission, *Docket 42516 - Georgia Power Company's 2019 Rate Case, Pt. 1*; Georgia Public Service Commission, *Docket 42516*.
[4] Georgia Public Service Commission, *Docket 42516 - Georgia Power Company's 2019 Rate Case, Pt. 1*.
[5] Galloway, Bluestein, and Hallerman, "The Jolt." Long-standing concern that environmental regulation of any kind, including a shift to low-carbon fuel sources will necessarily eliminate jobs shapes the labor politics of energy transition Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*; Goldmacher, Mills, and Evstatieva, *The Swing Issue That Could Win a Swing State*; Leopold, *The Man*

Who Hated Work and Loved Labor. Despite this antagonism, there is an equally long history of cooperation and leadership from organized labor on environmental regulation that has engaged a politics of reproduction in various ways. Beginning in the 1940s, the AFL-CIO supported early efforts to limit industrial air and water pollution, including sweeping environmental regulation at the federal level in the early 1970s Dewey, "Working for the Environment." The 1973 energy crisis and subsequent recession sparked a conservative shift in organized labor on environmental questions as the Building Trades and Mine Workers' unions moved to ally with employers and against regulation in conflicts over the environment. Fox, *United We Stand: The United Mine Workers of America, 1890-1990*; Montrie, *To Save the Land and People: A History of Opposition to Surface Mining in Appalachia*; Obach, *Labor and the Environmental Movement*.

[6] *Georgia Public Service Commissioner Debate*.

[7] Krause, "Commission Adds 2,210 MW of Renewable Energy in Georgia Power 2019 Integrated Resources Plan."

[8] Obach, *Labor and the Environmental Movement*. See also note 5 above.

[9] In California, New York, and Washington efforts to protect workers dislocated from coal and nuclear plants have been adopted with the support of environmental and community-based organizations that helped negotiate with utilities and regulators for worker and community protections in areas that would suffer from the loss of tax revenue. See: Brecher, "Jobs Beyond Coal: A Manual for Communities, Workers, and Environmentalists"; Dalzell, "Diablo Canyon"; Lipsitz and Newberry, "Huntley, a Case Study: Building Strategic Alliances for Real Change"; Miller, "Diablo Canyon Legislation Approved by California Senate."

[10] Mazzocchi, "A Superfund for Workers," 40; Leopold, *The Man Who Hated Work and Loved Labor*. For discussions on just transition and organized labor's role in the future of energy, see: Cha and Skinner, "Reversing Inequality, Combatting Climate Change: A Climate Jobs Program for New York State"; Cha, Wander, and Pastor, "Environmental Justice, Just Transition, and a Low-Carbon Future for California"; Healy and Barry, "Politicizing Energy Justice and Energy System Transitions"; Knuth, "Whatever Happened to Green Collar Jobs?"; Mayer, "Cross-Movement Coalition Formation"; Obach, *Labor and the Environmental Movement*; Pollin and Callaci, "A Just Transition for U.S. Fossil Fuel Industry Workers"; Smith and Tidwell, "The Everyday Lives of Energy Transitions"; Trumka, "Trumka to Utility Workers"; Weller, "Just Transition?"

[11] Walker and Storper, *The Capitalist Imperative*; Herod, "From a Geography of Labor to a Labor Geography"; Nagar et al., "Locating Globalization"; Wright, *Disposable Women and Other Myths of Global Capitalism*.

[12] Mann, "What's a Penny Worth?"; Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*.

[13] Du Bois, *Black Reconstruction in America, 1860-1880*; Foner and Lewis, "Race Relations in Old Southern Industries." Some of the earliest labor organizing in Georgia included efforts from white workers who militated against the practice of slave owners either hiring out enslaved people or allowing them to work for extra income as skilled craftspeople and builders. In 1845, the Georgia Legislature adopted an "Act against Black Mechanics" to restrict "prohibit colored mechanics and masons, being slaves or free persons of color, being mechanics or masons, from making contracts for the erection of buildings, or for the repair of buildings, and declaring the white person or persons directly or indirectly contracting with or employing them, as well as the master, employer, manager, or agent for said slave, or guardian for said free person of color, authorizing or permitting the same, guilty of a misdemeanor" (Foner and Lewis, 96-97). During a training at the IBEW Local 613 union office in fall 2019, the training coordinator asked if anyone knew the history of unions in the South. A Black woman participating in the training explained their formation to restrict competition from free or enslaved African Americans before the Civil War. The training coordinator, who was also a Black woman, argued that unions were also important to economic and racial justice struggles throughout the 20th century and currently. Over the course of eight weeks, we met several different union leaders who had begun to organize in poultry plants and city governments to demand better conditions for Black workers. This history of exclusionary organizing on the basis of race and craft and the role of unions in employment discrimination remains an important contradiction to consider contemporarily.

[14] Fletcher and Gapasin, *Solidarity Divided: The Crisis in Organized Labor and a New Plan Toward Social Justice*.

[15] Marshall, *Labor in the South*; Wesley, *Negro Labor in the United States 1850-1925: A Study in American Economic History*; Lee, *The Workplace Constitution from the New Deal to the New Right*.
[16] Northrup, "Organized Labor and Negro Workers."
[17] Washington, "Booker T. Washington Delivers the 1895 Atlanta Compromise Speech."
[18] "A Plea for His Race."
[19] Du Bois, *The Souls of Black Folk*, 24, 27; see Washington, "Industrial Training for the Negro."
[20] Du Bois, *The Souls of Black Folk*, 30.
[21] Roediger, *Working Toward Whiteness: How America's Immigrants Became White, The Strange Journey from Ellis Island to the Suburbs*.
[22] See Fletcher and Gapasin, *Solidarity Divided: The Crisis in Organized Labor and a New Plan Toward Social Justice*; Goldberg and Griffey, *Black Power at Work: Community Control, Affirmative Action, and the Construction Industry*; Greenberg, *Race and State in Capitalist Development*; Hill, "Myth-Making as Labor History: Herbert Gutman and the United Mine Workers of America"; Self, *American Babylon: Race and the Struggle for Postwar Oakland*; Spero and Harris, *The Black Worker: The Negro and the Labor Movement*; Sugrue, "Affirmative Action from Below"; Wilson, *America's Johannesburg: Industrialization and Racial Transformation in Birmingham*.
[23] Today, there are fifteen unions that belong to the coalition of North America's Building Trades Unions which include the International Brotherhood of Electrical Workers (IBEW), International Brotherhood of Teamsters (Teamsters), International Union of Bricklayers and Allied Craftworkers (BAC), International Union of Elevator Constructors (IUEC), International Union of Painters and Allied Trades (IUPAT), Laborers' International Union of North America (LIUNA), Operative Plasterers' and Cement Masons' International Association (OPCMIA), International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART), United Association – Union of Plumbers, Fitters, Welders and Service Techs (UA), United Union of Roofers, Waterproofers and Allied Workers (Union Roofers), International Union of Operating Engineers (IUOE), International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers (Boilermakers), International Association of Heat and Frost Insulators and Allied Workers (Insulators), International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers (IW), The Canadian Building Trades Unions (CBTU). See: North America's Building Trades Unions, "Affiliates."
[24] Marshall, *Labor in the South*, 48–49.
[25] Kuhn, Joye, and West, *Living in Atlanta: An Oral History of the City, 1914-1948*, 72–75.
[26] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*, 36.
[27] Scott and Guynn, "The Atlanta Streetcar Strikes," 440.
[28] Scott and Guynn, "The Atlanta Streetcar Strikes."
[29] Carson, *The Trolley Titans: A Mobile History of Atlanta*, 75.
[30] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*.
[31] Joiner, 84.
[32] "Tracy Addresses Electrical Union."
[33] In the Georgia Power archives at the Kenan History Center, mimeographed pages of the utility's annual financial reports depict the wage increases from $0.59 to $0.65 that those working in streetcar barns earned, the wage increases from $0.65 to $0.72 for Fulton County Electric Plant workers, while the wage level for Black workers stayed constant at $0.30 an hour Georgia Power Company, "Annual Report 1933, Railway and Bus Transportation." The collective bargaining agreement between the Amalgamated Association and utility in 1941 reads: "colored men will not be substituted for white men on work regularly performed by white men, but colored men may be used in emergencies or where assistance is required in heavy work." Georgia Power Company, "Memorandum of Agreement between Georgia Power Company and Amalgamated Association of Street, Electric Railway & Motor Coach Employees of America, Division No. 732. Effective May 1, 1941 Expires April 30, 1943," 17. By 1943, the language in the MOU had changed to say that "Laborers will not be substituted for regular men on any of the jobs regularly performed under this contract. Laborers may, however, be used in emergencies of where assistance is required in handling heavy work" Georgia Power Company, "Memorandum of Agreement between Georgia Power Company and Amalgamated Association of Street, Electric Railway & Motor Coach Employees of America, Division No. 732. Effective May 1, 1943 Expires April 30, 1944," 20. While ostensibly colorblind and in reference to pay scales negotiated through seniority, lawsuits brought by Black workers against the utility following the 1964 Civil Rights Act reported that 97% of all employees working in the job classification of laborer were Black. See: Hurst, "Suit Charges Bias at Ga. Power."

[34] Mayer, "Union Membership Trends in the United States."
[35] Windham, *Knocking on Labor's Door: Union Organizing in the 1970s and the Roots of a New Economic Divide*, 20.
[36] Windham, 21; Fraser, "Contradictions of Capital and Care."
[37] The Social Security Act also initially excluded protections for agricultural and domestic workers – occupations in which Black workers were most often employed – and devolved administration of welfare programs to state governments at the request of segregationist Southern congressmen intent on maintaining the racial labor hierarchy of the South. Agricultural and domestic workers were also excluded from the Fair Labor Standards Act, which set minimum wage and labor conditions, and the National Labor Relations Act, which protected wageworkers rights to organize and bargain collectively with employers Gilmore, "Fatal Couplings of Power and Difference"; Katznelson, *When Affirmative Action Was White*; McDowell, *Working Bodies: Interactive Service Employment & Workplace Identities*; Quadagno, *The Color of Welfare*.
[38] Lichtenstein, *State of the Union*, 10.
[39] Cooper, *Family Values*.
[40] Gilmore, "Abolition Geography and the Problem of Innocence"; Gilmore, Ruth Wilson Gilmore on Covid-19, Decarceration, and Abolition.
[41] Cowie, *Capital Moves*.
[42] Randolph, "Right to Work Laws Called Threat to Decent Wages," 108.
[43] Griffith, *The Crisis of American Labor: Operation Dixie and the Defeat of the CIO*. Campaigns led by Black, women, and Latinx workers continued with renewed force following the Civil Rights Act, which prohibited workplace discrimination, however, unionization drives nationwide faced growing opposition through legal and illegal means as employers practiced intimidation, violated NLRB rules, and threatened plant relocation and automation Windham, *Knocking on Labor's Door: Union Organizing in the 1970s and the Roots of a New Economic Divide*.
[44] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*, 164. Given that Georgia Power is an open shop, the union must represent all workers within the bargaining unit, including those who are not members. While it represents non-members, these individuals do not pay dues, reducing the available monetary resources for lawyers and organizers to represent employee interests, what labor economists term the "free-rider problem."
[45] Du Bois, *Black Reconstruction in America, 1860-1880*, 597.
[46] Glenn, "From Servitude to Service Work: Historical Continuities in the Racial Division of Paid Reproductive Labor"; Mann, *Our Daily Bread: Wages, Workers, and the Political Economy of the American West*.
[47] Goldberg and Griffey, *Black Power at Work: Community Control, Affirmative Action, and the Construction Industry*; North America's Building Trades Unions and NABTU's Committee of Women in the Trades, "Diversity Toolkit: Your Guide to Best Practices for Recruiting a More Diverse Membership"; Sugrue, "Affirmative Action from Below"; Wagner, "Building Construction Tradeswomen Advocacy Organizations and the Number of Women Working in the Building Trades."
[48] Dickens, *Hard Times*; Marx, *Capital: A Critique of Political Economy, Volume I.*
[49] Marx, *Grundrisse: Foundations of the Critique of Political Economy*, 702.
[50] It is important to briefly explain the particular model of craft labor organizing, which is meant to provide security for workers in the unstable and cyclical construction market. Unlike industrial unions that grew in prominence following the Wagner Act, which organize all of the non-managerial workers within a workplace such as a Ford assembly plant or Nabisco factory, craft labor operates by trying to create a monopoly on skill. Over time, unions in conjunction with contractors developed intensive, three- to five-year apprenticeship programs that a worker must complete to be a certified, journey-level worker. The apprenticeship is a "gold standard" in construction workforce training and is a portable credential, like a diploma. See: Luke et al., "Diversity in California's Clean Energy Workforce."
[51] Philips, "Environmental and Economic Benefits of Building Solar in California: Quality Careers, Cleaner Lives." Given that construction is a volatile field, and people will work for many different employers throughout the course of their career, the multi-employer healthcare and pension funds that unions manage are portable between different contractors. Almeida, "Multi-Employer Plans: Plan Design for the Future"; Ghilarucchi, *Labor's Capital: The Economics and Politics of Private Pensions*; Jones, Philips, and Zabin, "The Link Between Good Jobs and a Low Carbon Future"; Philips, "Environmental and Economic Benefits of Building Solar in California: Quality Careers, Cleaner Lives."

[52] Interview 36, September 2019
[53] Postone, *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*.
[54] Bivens et al., "How Today's Unions Help Working People."
[55] Hurst, "Suit Charges Bias By Georgia Power."
[56] Hurst, "Suit Charges Bias at Ga. Power."
[57] "Ga. Power Ruling Aids Black Hopefuls"; "Judge Orders Ga. Power to Reform Racist Policies."
[58] Granum, "$2.1 Million Bias Judgement Hits Ga. Power"; Jacobs, "Georgia Power: Paying a Little Back." The U.S. Supreme Court later decided that the seniority system used within the Company and union was not discriminatory as it met the targeted hiring criteria outlined by the prior decision in federal court. Mooney, "Ga. Power's Seniority Plan Is Not Biased Court Rules."
[59] Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*, 171.
[60] "NAACP Signs 'Fair Share' Pact with Georgia Power"; "City Hosts Workshop for Contracting Firms."
[61] "Georgia Power Signs Equal Opportunity Settlement."
[62] Newkirk, "Long Legal Labyrinth."
[63] Quinn, "Bias Lawsuit Hits Georgia Power"; Quinn, "Ga. Power, Plaintiffs Willing to Talk"; Stewart, "Ga Power Faces Clergy."
[64] Newkirk, "Long Legal Labyrinth," Q8.
[65] Poe, "Race Business," Q1.
[66] Holsendolph, "Traditional 'Atlanta Way' Not Holding."
[67] Poe, "Race Business," Q5.
[68] Newkirk, "Long Legal Labyrinth," Q4.
[69] Newkirk, "Long Legal Labyrinth." Harris continued, "This is not an emotional lawsuit… We're qualified black employees who represent not just ourselves but all black employees within the Southern system. I did a good job for Southern Co."
[70] Harris and another employee who joined onto the suit were not in full time work at the time the story was written. The Company, insisting the changes were not linked to the lawsuits, conducted a glass ceiling audit of its pay and promotion policy, instituted a diversity council, required diversity seminars for all employees, created support groups for women and workers of color, and worked to strength relationships with colleges at the Atlanta University Center. See: Poe, "Race Business"; Quinn, "Power Company's Response to Bias Lawsuit Protested"; Stewart, "Ga Power Faces Clergy."
[71] Southern Company, "Southern Company Recognized as a Top Company for Diversity and Inclusion by DiversityInc for the Fourth Consecutive Year."
[72] Southern Company, "Corporate Responsibility Report 2018," 29, 65.
[73] Marable, "Power to the People?," 9.
[74] Taft and Heys, *Big Bets*, 249.
[75] Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*, 46.
[76] Hall and Institute for Southern Studies, "Georgia Power Company," 3.
[77] Taft and Heys, *Big Bets*.
[78] Neal, "Some Members Out of Work; Members Picket Square D," 55.
[79] Neal, "Power Company Contracts for Union, Non-Union Work," 66.
[80] Stewart, "Rifle Fire Knocks Out Rockdale Power"; Watson, "Strike! Ga. Power."
[81] Fort, "Workers Protest Request for Power Hike."
[82] Marable, "Power to the People?"
[83] Hightower, "New Concern for Utility: Rate Structure"; Jordan, "Power Group Rips Rate Hike"; Taft and Heys, *Big Bets*; The Georgia Power Project, "A City-Owned Power Company?"
[84] Huey and Townsend, "Power Group Rips Rate Hike."
[85] Hall and Institute for Southern Studies, "Georgia Power Company," 3.
[86] Hall and Institute for Southern Studies, 3.
[87] Georgia Power was in a very weak financial situation in 1974 and saved from possible bankruptcy when it entered into a partnership with the Oglethorpe Electric Membership Corporation, see Chapter Seven.
[88] Yeargain, "Scribe Highlights Proposed Nuclear Powerhouse."
[89] "5th District Progress Meeting Held in Hollywood Beach, Florida," 4.
[90] Neal, "'Local Lines' Sing Sad Song Of Nationwide Unemployment."
[91] One indicator of the amicable relationship between the union and utility is seen in the bargaining history. Since the 1930s, the IBEW Local 84 has only gone out on strike once. In 1981, Georgia Power union

members struck for fifteen days over wages. Labor action was also threatened in advance of the Olympics, but the contract disputes were resolved. See: Joiner, *Let Us Reason Together: A History of Labor Relations of the Georgia Power Company*; Taylor and Secrest, "Union Approves Contract with Georgia Power."
[92] While the Company would normally finance a project, to be paid off over the duration that a plant was in operation, in 2009, the Georgia legislature passed a measure allowing the Company to recover financing costs during construction. See: Southern Company, "Plant Vogtle 3 and 4."
[93] Faeth et al., "The Water-Energy Nexus in Georgia: A Detailed Examination of Consumptive Water Use in the Power Sector"; Nuclear Watch South, "Nuclear Watch South Opposes Vogtle 3 Fuel Load"; Rafter, Olson, and Master, "Community Impacts at the Crossroads of Nuclear and Climate Injustices in the U.S. South"; Quick Chats; "Vogtle Nuclear Boondoggle."
[94] Interview 11, May 2019
[95] Interview 11, May 2019
[96] Interview 11, May 2019. Another advocate said that visiting Plant Vogtle left her with a bad feeling that people were being taken advantage of because the plant towers above cotton fields and trailers where traveling workers who have come in from all over the country for specialized trade work live. Interview 4, March 2019. This image stuck with me throughout my research as a palimpsest representing the utility's modernizing efforts to grow high-tech, nuclear industry in a landscape that carries the imprint of enslaved labor, militarization, and racial violence.
[97] Interview 35, September 2019
[98] Faeth et al., "The Water-Energy Nexus in Georgia: A Detailed Examination of Consumptive Water Use in the Power Sector"; Kempner, "Trump Official"; Kempner, "State Staff"; Kempner, "Georgia Power Bills Could Rise"; Swartz, "Plant Vogtle Reactors Hit Benchmark, but Skepticism Lingers."
[99] Solar Energy Industries Association, "Georgia Solar."
[100] Krause, "Commission Adds 2,210 MW of Renewable Energy in Georgia Power 2019 Integrated Resources Plan."
[101] Interview 33, August 2019
[102] Utility-scale solar can mean many different sizes of solar installation, but is often defined as an array larger than 5 MW see: Donnelly-Shores, "What Does 'Utility-Scale Solar' Really Mean?" Advocates in Georgia have defined utility-scale as projects that are not "installed 'behind-the-meter,' which means that the energy "is consumed on-site by a home or business." Across the U.S., the state-average for utility-scale projects is 59.7% of total solar generation, leading solar advocates in Georgia to define the state as "unbalanced" given its 97% to 3% distribution ratio. Prieto and Gunning, "Utility Barriers to Rooftop Solar in Georgia." Also described in Interview 5, May 2019; Interview 16, June 2019; Interview 17, June 2019.
[103] Solar Energy Industries Association, "Georgia Solar."
[104] Interview 16, June 2019. Another solar energy advocate who I interviewed also described the solar energy industry as both a new industry and a transformation of the existing electricity sector given that solar can either replace other fuel sources on the grid and the power from them can be sold through an electric utility, like Georgia Power. However, he also envisions a disruptive potential for solar to distribute the resources of power generation. He observed: "It is, and it can be both [a new industry and a transformation of the electricity sector]. So right now, what we're seeing is there's a lot of utility scale solar going up. And that's the existing infrastructure you know, slowly moving away or increasing the amount of renewable energy that's in its energy mix. And we hope that will continue but with distributed generation is transformative because for the first time in any of our lifetimes, we now have an opportunity to use our own property to generate our own electricity using our own resources, the sun, to enrich ourselves, to become more energy independent, and more resilient. That's something we've never seen before. The old model is large, you know, utility like large power plants that are located a long way away. And that energy is transmitted and distributed over long distance power lines to the population centers. But now, with distributed generation solar, we're seeing an opportunity to, I call it the democratization of energy, basically, where we have an opportunity to change the whole the whole dynamic of how we even think about energy. It's an opportunity for anybody who has property – I guess that's the one barrier you have to have property – but to participate in a new clean energy economy that never could have existed before. So, you're taking a lot of wealth and power from a very few amount of people and now it can be distributed and spread out among an entire population. And so that's a whole systematic and … disruptive change in how we can look at it and it also gives more opportunity for energy as well. A lot of people don't have $28 billion to build a nuclear power plant and get low interest loans from the federal government and subsidies … but solar is becoming increasingly the cheaper. So, a lot more people can afford to generate their own

electricity than ever before. And then, if we can get some of these policy barriers that are in place… so [that] more financing products and structures can come in and even more people can participate in the new clean energy." Interview 17, June 2019.
[105] Interview 17, June 2019
[106] Interview 15, June 2019
[107] Interview 39, September 2019
[108] Interview 17, June 2019.
[109] Interview 16, June 2019.
[110] Interview 33, August 2019
[111] Interview 37, September 2019
[112] Interview 5, April 2019
[113] Interview 5, April 2019
[114] Interview 17, June 2019
[115] Interview 16, June 2019
[116] Interview 39, September 2019
[117] Interview 39, September 2019
[118] Interview 39, September 2019
[119] Interview 5, April 2019
[120] Interview 39, September 2019
[121] Interview 31, August 2019
[122] Interview 39, September 2019
[123] Interview 31, August 2019
[124] Interview 16, June 2019
[125] "California's Solar Gold Rush."
[126] Interview 37, September 2019
[127] Interview 37, September 2019
[128] Interview 33, August 2019
[129] Interview 31, August 2019. Most construction unions, including the IBEW, work with signatory contractors who are part of the National Electrical Contractors Association (NECA) and have standing agreements with the IBEW. They are able to hire a flexible source of workers who have received a particular level of training, and in return, the company agrees to pay prevailing wage and make contributions to the pension, healthcare, and apprenticeship funds to train the next generation of electrical workers.
[130] Interview 16, June 2019. Elsewhere in the U.S., the IBEW has also used apprentices and helpers on solar farm construction where the skill demands are not as intensive as other construction sites. See: Luke et al., "Diversity in California's Clean Energy Workforce."
[131] Participant observation, February 5, 2020
[132] Interview 35, September 2019
[133] Boggs, *The American Revolution: Pages from a Negro Workers Notebook*.
[134] Herod, "From a Geography of Labor to a Labor Geography"; Marx, *Grundrisse: Foundations of the Critique of Political Economy*; Moberg, "For Unions, Green's Not Easy"; Obach, *Labor and the Environmental Movement*.
[135] Interview 4, April 2019; Interview 21, June 2019; Interview 25, July 2019; Interview 27, August 2019; Interview 35, September 2019
[136] Freshour, "'Ain't No Life for a Mother!' Racial Capitalism and the Crisis of Social Reproduction"; Marshall, *Labor in the South*; Windham, *Knocking on Labor's Door: Union Organizing in the 1970s and the Roots of a New Economic Divide*.
[137] Bivens et al., "How Today's Unions Help Working People"; Foster and Lu, "Atlanta Ranks Worst in Income Inequality in the U.S."; Randolph, "Letter to Layle Lane on the Ocean Hill-Brownsville Crisis (1968)."
[138] During my research, I participated in a labor-community leadership training with community and energy advocates at the IBEW Local 613 union hall. The labor temple in downtown Atlanta is an important organizing space where the Democratic Party of Georgia, 9 to 5, the New Georgia Project, and other groups organizing to build working class power across the city are based. I only met with labor leaders from the IBEW once, however, I also saw IBEW Local 613 leaders engaged in advocacy at other points including a

conference in Chicago for the Labor Network for Sustainability and at a rally for the Communication Workers of America-United Campus Workers at the University of Georgia.
[139] Interview 35, September 2019. So far as I could find, diversity information for Georgia Power is not publicly available. The Southern Company does produce a Corporate Responsibility Report that includes general information on diversity across the company in which the Company reported that in 2018, 25% of its workforce are women, including 23% of management, and 27% are "minorities," including 20% of management. See: Southern Company, "Corporate Responsibility Report 2018," 65.
[140] Interview 39, September 2019
[141] Interview 33, September 2019
[142] Luke and Heynen, "Community Solar as Energy Reparations: Abolishing Petro-Racial Capitalism in New Orleans."
[143] Interview 17, June 2019
[144] Participant Observation, March 26, 2019
[145] Interview 19, June 2019
[146] Participant observation, February 5, 2020

Notes to Chapter 6
[1] Job training is a broad category that is generally comprehensive of the education and credentialing needed to enter to into and progress along a given career pathway. Education in the U.S. is compulsory to the age of 16 as part of the understanding that citizens should be able to read, write, complete basic math, and have a general sense of U.S. government sufficient to participate in representative democracy. After high school, training pathways diverge between apprenticeship, technical schools, community colleges, and on-the-job training. Unions, schools, colleges, prisons, work release programs, cities, employers, and foundations variously contribute to training. Training often continues throughout a job and the majority of funding for job training is in continuing education in white collar professional, managerial, and technical positions such as the resources that the University of Georgia provides for advanced graduate students and faculty to attend professional conferences. Interview 6, May 2019, see also Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*; Lafer, *The Job Training Charade*; Worker, Owens-Wilson, and Beach, "Good Jobs in a Clean Energy Economy Through the Clean Power Plan."
[2] Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*. A neoliberal and neoconservative onslaught on the welfare state that also consolidated during this period shifted responsibility for employment and higher education onto workers and their families. Cooper, "All in the Family Debt."
[3] This is a pseudonym to protect the anonymity of participants.
[4] Interview 23, July 2019
[5] Interview 23, July 2019
[6] Interview 6, April 2019
[7] Goldberg and Griffey, *Black Power at Work: Community Control, Affirmative Action, and the Construction Industry*; Stein, "Affirmative Action and the Conservative Agenda: President Richard M. Nixon's Philadelphia Plan of 1969"; Sugrue, "Affirmative Action from Below."
[8] Peck, "*Workfare*."
[9] On one hand, advocates argue that "green jobs" programs developed parallel to existing workforce development infrastructure and short-term training initiatives in single-skill occupations like weatherization and solar panel installation fail to provide a broad occupational skill set that allows workers to move between sectors as funding and job opportunities change. For instance, training someone to be an electrician, which requires recognized credentials and provides a broad skillset, improves the job and wage prospects for a worker relative to a solar installer. On the other hand, many of the same advocates argued that addressing climate change is a system wide problem and all jobs, industries, and infrastructure must decarbonize at a scale that defining a small sector of emergent positions in clean energy implementation as "green jobs" does not register. The work of Mijin Cha, Denise Fairchild, Chandra Farley, Betony Jones, Antonio Lopez, Manuel Pastor, Juliana Pino, Robert Pollin, Deborah Scott, Laura Skinner, Nathaniel Smith, Sean Sweeney, Larry Williams, and Carol Zabin among others has been especially important in shaping my thinking on the social reproduction of labor. For a sample of the policy reports and documents describing this organizing and research see: Cha and Skinner, "Reversing Inequality, Combatting Climate

Change: A Climate Jobs Program for New York State"; Conrad, "Georgia Stand Up: Organizing for an Equitable Atlanta"; Fairchild and Rose, "Inclusive Procurement And Contracting: Building a Field of Policy and Practice"; Fairchild and Weinrub, *Energy Democracy*; Little Village Environmental Justice Organization, "Coal Plant Shutdown"; Lipsitz and Newberry, "Huntley, a Case Study: Building Strategic Alliances for Real Change"; Matthew and Williams, "The People of Color Caucus Resolution"; Pollin and et al., "Green Growth: A U.S. Program for Controlling Climate Change and Expanding Job Opportunities"; Sawin, Smith, and Smith, "Equity, Health, Resilience, and Jobs"; Sweeney, "Resist, Reclaim, Restructure: Unions and the Struggle for Energy Democracy"; Zabin et al., "Advancing Equity in California Climate Policy: A New Social Contract for Low-Carbon Transition."

[10]Job training for immigrants and formerly enslaved people took off after the Civil War. Among the most renowned efforts was the educational program at Booker T. Washington's Tuskegee Institute that became the "symbol of racial progress" where "formal training in the values and skills necessary for bourgeois success—was viewed as the beginning of mass liberation." As introduced in the Chapter Five, Washington's "definition of the educational needs of black [worker]s in terms of proper training, not state financial support, harmonized with Bourbon definitions of economy." In this case, training provided basic education in reading, writing, numeracy, and mechanical and skilled trades while inculcating participants with middle class values. See: Stein, "'Of Mr. Booker T. Washington and Others': The Political Economy of Racism in the United States," 442, 443. Programs in Atlanta that the Urban League sponsored paired training as a pathway to job placement and had some success in placing Black workers in positions on federal housing projects as part of a campaign "for black jobs since the darkest days of the depression." The Urban League became interested in "employment plans, and particularly the opportunities for training," in defense contracting scheduled to begin in Atlanta with the ramp up of production preceding WWII, and militated to desegregate the training programs opened in Atlanta that provided technical education in engineering, drafting, and skilled trades to white workers. See: Reed, "Bell Aircraft Comes South: The Struggle by Atlanta Blacks for Jobs During World War II," 102.

Subsequent initiatives in Atlanta have been more and less successful in directing public and private investment to address joblessness. Judith Stein describes the fraught nature of training and job placement in which race and class divided organizing priorities following the Civil Rights Act that prohibited discrimination in employment. In her analysis of programs that emerged to increase the share of Black workers in the building and construction trades, she argues that the construction sector had "symbolic significance" given its "visibility, and the vigor with which the building trades defended their practices" as the Nixon Administration rolled out the "Philadelphia Plan," which was modeled in other cities, including Atlanta, in an effort to increase the share of jobs going to Black workers. Implementation of the plan, however, did not necessarily create a skilled Black labor force. Stein notes this was in part because the quotas to require a certain number of jobs on projects that received federal funding go to workers of color did not necessarily include access to "a career ladder that training and a union card represented" (p.195). Membership in the union was central to the litigation with IBEW Local 84 discussed in Chapter Five where the share of Black workers who were members of the union was mandated to increase. Stein also observes that Black leaders at the time were divided on the Philadelphia Plan. Both the AFL-CIO and Black civil rights organizers leant more vocal support to other public works measures that would benefit a larger share of the population and address the needs of the urban unemployed through public jobs. See Stein, "Affirmative Action and the Conservative Agenda: President Richard M. Nixon's Philadelphia Plan of 1969," 184, 195; see also discussion in Reed, Jr., "Judith Stein and the Historical Materialist Study of American Political History."

[11] Senator Humphrey notes that these hearings follow a mandate from the 1946 National Employment Act that established the Committee and directed Congress and the President to maximize employment, production, and purchasing power. Humphrey, Jobs and Prices in Atlanta. See discussion also in Cowie, *Stayin' Alive: The 1970s and the Last Days of the Working Class*.

[12] Shearer, Jobs and Prices in the West Coast Region, 115.

[13] Heffernan, "Jobs for the Environment-The Coming Green Collar Revolution," 134.

[14] Interview 21, June 2019

[15] Interview 21, 2019; Among the initiatives that Heffernan proposed was a recycling program based on the model of the Berkeley Ecology Center, which has continually-operated and been a model program to move people out of poverty through green employment. Pinderhughes, "Work Force Opportunities in the Growing Green Economy"; Pinderhughes, "Green Collar Jobs: An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for Men and Women with Barriers to Employment." In the

hearings in Atlanta, Clark College President and member of the Panel on Job Creation Programs, Vivian Henderson, also named the importance of public waterway infrastructure for implementing local and targeted hire programs to increase racial diversity in the Building Trades unions Henderson, Jobs and Prices in Atlanta, 103.

[16] He also named his support for the Humphrey-Hawkins Bill that Senator Humphrey had proposed (and which was later adopted without a job guarantee in 1979).

[17] Jackson, Jobs and Prices in Atlanta, 8.

[18] Henderson, Jobs and Prices in Atlanta, 103.

[19] Interview 21, June 2019

[20] Shearer, "'Green' Economics: Planning with a Political Face"; Stein, "Affirmative Action and the Conservative Agenda: President Richard M. Nixon's Philadelphia Plan of 1969," 193.

[21] See: Gilmore, "Fatal Couplings of Power and Difference."

[22] Interview 21, June 2019

[23] Nelson, S.1559 - 93rd Congress (1973-1974): An Act to assure opportunities for employment and training to unemployed and underemployed persons.

[24] McLaughlin, "Effects of Eliminating Public Service Employment," 15.

[25] Cowie, *Stayin' Alive: The 1970s and the Last Days of the Working Class*, 262, see also 270-288.

[26] Lafer, *The Job Training Charade*, 21.

[27] Lafer, *The Job Training Charade*.

[28] Perhaps the most well-known program were the educational efforts embedded in the G.I. Bill that paid the way of veterans through high school, vocational training, or college. Importantly, the effects of the GI Bill were uneven and particularly so given that this federal program disbursed funds to local and state officers who administered the program. This meant that Black veterans, the majority of whom lived in the South, often received reduced benefits. See: Bolte and Harris, *Our Negro Veterans*; Mangum, *MDTA: Foundation of Federal Manpower Policy*.

[29] In the 1950s, unemployment again rose and was particularly severe in the northeast, as textile plants relocated to southern states, and in the Appalachian coalfields, as mechanization and the switch to gas and oil led to a decline in coal employment. In coal-producing regions, "the effect [of the downturn] was community-wide. Areas such as the mining towns of Pennsylvania and West Virginia lacked the diversified economic environment that afforded alternate opportunities for employment" Kremen, "MDTA: The Origins of the Manpower Development and Training Act of 1962." Repeated efforts to pass legislation to support distressed areas culminated in the Area Redevelopment Act of 1961 and the subsequent Manpower Development and Training Act of 1962, which emphasized training for recently unemployed workers. Training programs included a range of curricula from basic literacy to advanced manufacturing skills with the intent to increase individual's "human capital" and competitiveness for anticipated industrial employment Quadagno, *The Color of Welfare*; Lafer, *The Job Training Charade*. Training received support across the political spectrum, but was not a comprehensive labor policy and had "little capacity to alter patterns of private activity, selective interventions in employment had little to do with American economic policy; they became viewed as welfare policies that offered minimal services to the poorest citizens." See: Weir, "The Federal Government and Unemployment: The Frustration of Policy Innovation from the New Deal to the Great Society," 150. A 1968 analysis of the Manpower Act shows that institutional training struggled to correct the "'last in-first out' problems" of "various disadvantaged groups" and the "placement experience [into jobs] of nonwhites [wa]s much less positive than the picture of white enrollments" Mangum, *MDTA: Foundation of Federal Manpower Policy*, 95–96, 98. Despite the intent to provide opportunities for both dislocated and under-employed workers, training initiatives were unable to influence employers and struggled to secure job placement or economic mobility to participants.

Specific programs to address plant, mine, or shop closure included in the Trade Expansion Act of 1962, which authorized Trade Adjustment Assistance for workers including additional unemployment insurance, which could also be extended for workers enrolled in job training, and a relocation allowance if a worker received an offer to relocate elsewhere. See: Trade Expansion Act of 1962. Building from this model, the Job Training Partnership Act of 1982 (JPTA) authorized training, job search, and relocation assistance for "dislocated workers," emphasizing their condition out of place in the changing U.S. economy. In the 1990s, JPTA was amended again to authorize assistance for workers displaced as a result of defense spending cuts or the 1990 Clean Air Act Amendments. See: U.S. Congressional Budget Office, *Displaced Workers*, 31. Economic studies on the effectiveness of these programs indicate that dislocated workers see the greatest earning losses and that these losses tend to have localized effects, particularly in

high-unemployment areas. See: Powers and Markusen, "A Just Transition? Lessons from Defense Worker Adjustment in the 1990s"; D'Amico and Schochet, "The Evaluation of the Trade Adjustment Assistance Program"; Walker, "The Transitional Costs of Sectoral Reallocation." In sum, reported Ann Markusen and Laura Powers "the American workforce development system cannot yet move structurally displaced workers quickly from one set of obsolete activities to other productive ones. The system is underfunded, hampered by a continued focus on disadvantaged, hard-to-employ workers, and, as a rule, disconnected from economic development efforts." See: Markusen and Powers, "Laid-Off Workers Can't Expect Soft Landing"; Powers and Markusen, "A Just Transition? Lessons from Defense Worker Adjustment in the 1990s."

[30] Weir, "The Federal Government and Unemployment: The Frustration of Policy Innovation from the New Deal to the Great Society," 182.

[31] Eligible City of Atlanta residents who have lost their jobs or are seeking work and meet certain targeted criteria can access services through the job center, WorkSource Atlanta, which provides classes in GED completion, work readiness (i.e. resume prep, interview practice), computer skills, and connections to training providers such as Atlanta Builders, Goodwill, the Urban League, and the Technical Colleges among many others. "American Job Centers"; WorkSource Atlanta, "Training."

[32] Interview 38, September 2019. He also pointed out that WIOA monies can help with anything except housing.

[33] Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century, 25th Anniversary Edition*.

[34] Lafer, *The Job Training Charade*, 5.

[35] Gramsci, *Selections from the Prison Notebooks*, 350; Willis, *Learning to Labour: How Working Class Kids Get Working Class Jobs*.

[36] Cooper, *Family Values*; Peck, *Workfare States*.

[37] Interview 6, May 2019

[38] Davis, "Manufacturing Mammies: The Burdens of Service Work and Welfare Reform among Battered Black Women," 278.

[39] Davis, 282.

[40] Davis, "Manufacturing Mammies: The Burdens of Service Work and Welfare Reform among Battered Black Women"; "TANF Eligibility Requirements."

[41] Banfman and Smeloff, *Jobs from the Sun*; Banfman, "Clean Energy Dreams: A Tale of Two Friends Who Set out, Long before Obama, to Transform Society with Green Energy and Jobs"; Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*.

[42] Durning, *Green Collar Jobs*.

[43] "'Millions of Green Jobs to Be Created'"; "Presidential Earth Day Address." While anecdotal, it is interesting to note that Derek Shearer served as a speechwriter for the Clinton campaign and Al Gore was present as a junior senator from Tennessee during federal hearings in which the future of green technologies were debated on capital hill. These proceedings included testimony from Jerry Brown's later advisor and co-author of the report "Jobs from the Sun," Fred Banfmann. See: Banfman, "Clean Energy Dreams: A Tale of Two Friends Who Set out, Long before Obama, to Transform Society with Green Energy and Jobs."

[44] Clinton, "Executive Order 12898 of February 11, 1994, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations"; Pulido, "Geographies of Race and Ethnicity II."

[45] He explains that, "the black workforce remains overrepresented in low-paying, low-skill, high-risk blue collar and service occupations where there is more than adequate supply of replacement labor." See Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*, 10.

[46] Bullard, 10.

[47] One notable program was the Environmental Workforce Development and Job Training program developed through the Environmental Protection Agency Office of Brownfields and Land Revitalization, which began in 1995 to train and hire people living adjacent to Brownfields. See: EPA Office of Brownfields and Land Revitalization, "Environmental Workforce Development and Job Training: Understanding the FY20 Guidelines."

[48] See Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*, 152–53; Tobin, "Dirty Jobs Benefit under EPA Grant."

[49] In Oakland, the first Green Jobs Corps was initially funded through a city grant awarding money from a court settlement with electricity providers that had rigged California's newly deregulated electricity market in 2001, causing rolling blackouts throughout the state. This seed money supported a partnership between the Ella Baker Center, the IBEW, and the Apollo Alliance of environmental and labor organizations to offer pre-apprenticeship programs to train unemployed workers from populations under-represented in the Building Trades unions on "green" projects, such as energy efficiency retrofits for low-income renters and residential solar installations. See Kim, Kirsch, and Reyes, "Making Green Work: Best Practices in Green-Collar Job Training."
[50] LaVelle, "The Ludacris Foundation, Green For All and Actress Keshia Knight Pulliam Host 'Keep It Fresh' Earth Day Event."
[51] Mirpuri, Feldman, and Roberts, "Antiracism and Environmental Justice in an Age of Neoliberalism," 408–9.
[52] Jones, *The Green Collar Economy: How One Solution Can Fix Our Two Biggest Problems*.
[53] "Bridging The Green Divide: Van Jones On Jobs, Jails, And Environmental Justice."
[54] The International Brotherhood of Electrical Worker had already negotiated a package for members dislocated from employment as a result of electricity deregulation in California when PG&E sold its generating capacity. Elsewhere across the U.S., unions were also organizing in response to environmental legislation. Perhaps the most influential example in that of Tony Mazzocchi, President of the Oil, Chemical, and Atomic Workers (OCAW) union, which represented refinery and chemical plant workers affected by federal environmental regulation and nuclear weapons workers who lost their jobs with decommissioning at the end of the Cold War, began to call for a "superfund for workers." Based on the G.I. Bill of Rights after World War II, the Superfund for Workers, which was later renamed Just Transition, would provide full pay and benefits and up to four years of tuition assistance for continued education as well as economic support for communities affected by the loss of tax revenue from closing facilities. See: Brecher, "A Superfund for Workers"; Mazzocchi, "A Superfund for Workers." Just transition asserted that environmental and occupational health are inextricably intertwined and put forth a politics of reproduction that sought to preserve the standard of living that a job offers through education, wage replacement, healthcare coverage, and a bridge to retirement while also working to clean up the environment in which workers lived. See: Mazzocchi, "A Decade of Genetic Struggle." OCAW eventually merged with the United Steelworkers, who have remained involved in environmental politics. Following the Kyoto Protocol, "big green" environmental organizations and some unions began to meet as the Blue Green Working Group to put forth a climate change policy that could support good jobs and the environment, which eventually reorganized as the BlueGreen Alliance. See: Barrett et al., *Clean Energy and Jobs*. Also see Chapter Five, note 5.
[55] Mattera et al., "High Road or Low Quality Jobs in the Green Economy?," 10. Apollo Alliance in part merged with the BlueGreen Alliance, a coalition of labor and environmental organizations that include the United Steel Workers, the Sierra Club, the IUE-CWA, NRDC, SEIU, National Wildlife Federation, the Utility Workers Union of America, the Union of Concerned Scientists, the American Federation of Teachers, the United Association, EDF, the International Union of bricklayers and Allied Craftworkers, and the League of Conservation Voters. For more information see: BlueGreen Alliance, "About Us: Creating Good Jobs, a Clean Environment, and a Fair and Thriving Economy."
[56] In conjunction with city and state policymakers, unions, and community-based partners, think tanks and academics listed below encouraged "high road" job creation in the emerging renewable energy sector based on the understanding that construction jobs could not be outsourced to other countries and public incentives could be applied to attract manufacturing to the U.S. The specific model of training would bring workers through community-led pre-apprenticeship programs and union apprenticeships to create pipelines or pathways to careers to rebuild a "social contract" based on directing public funding to ensure that trainees would have careers that offered middle-class wages and benefits. Some of the most influential organizations include the Center for American Progress, the Center on Wisconsin Strategy, the Cornell Worker Institute, the Emerald Cities Collaborative, the Economic Policy Institute, the Partnership for Working families, the Labor Network for Sustainability, Trade Unions for Energy Democracy, the University of California, Berkeley Labor Center, and Van Jones's organization Green for All. For policy platforms, resources, and recommendations collected writing and research see: Brecher, "Jobs Beyond Coal: A Manual for Communities, Workers, and Environmentalists"; Buffa et al., "California's Global Warming Solutions Act of 2006: A Background Paper for Labor Unions"; Cha and Skinner, "Reversing Inequality, Combatting Climate Change: A Climate Jobs Program for New York State"; Emerald Cities

Collaborative, "Apprenticeship Resource Guide"; Pollin and et al., "Green Growth: A U.S. Program for Controlling Climate Change and Expanding Job Opportunities"; Partnership For Working Families, "Community Benefits 101"; Sweeney, "Resist, Reclaim, Restructure: Unions and the Struggle for Energy Democracy"; White and Walsh, "Greener Pathways: Jobs and Workforce Development in the Clean Energy Economy."

[57] Johnson, "On Family Life And Capitalist Governance"; Mattera et al., "High Road or Low Quality Jobs in the Green Economy?"

[58] UC Berkeley Labor Center, "CONFERENCE"; Zabin et al., "Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities." Explicit measures to support labor organizing in solar and wind energy employment were also seen as an important strategy to offset Building Trades opposition to climate regulation that could close coal-fired power plants where workers are more likely to be represented by a union. Bivens, "A Comprehensive Analysis of the Employment Impacts of the EPA's Proposed Clean Power Plan."

[59] The first proposed measure, the 2007 Green Jobs Act was rolled into the Housing and Economic Recovery Act of 2008 signed adopted the Bush Administration. Pelosi, H.R.3221 - 110th Congress (2007-2008): Housing and Economic Recovery Act of 2008.

[60] Obey, Text - H.R.1 - 111th Congress (2009-2010): American Recovery and Reinvestment Act of 2009.

[61] Regional implementation of clean energy with a focus on good job creation has been especially successful in certain regions. On California see: Kim, Kirsch, and Reyes, "Making Green Work: Best Practices in Green-Collar Job Training"; Partnership For Working Families, "Community Benefits 101"; Zabin and Buffa, "Addressing the Employment Impacts of AB 32, California's Global Warming Solutions Act"; Zabin et al., "Advancing Equity in California Climate Policy: A New Social Contract for Low-Carbon Transition." Prominent state and regional coalitions working in Appalachia, California, Illinois, the Navajo Nation, New York, and Washington among others also have brought together environmental and environmental justice organizations, unions, tribal governments, and business to build pathways to careers in the clean energy sector to varying degrees of success. See: Appalachian Voices, "Coal Community Leaders Release Historic Platform for National Economic Transition"; Cha and Skinner, "Reversing Inequality, Combatting Climate Change: A Climate Jobs Program for New York State"; Citizens Utility Board, "What Is the Future Energy Jobs Act?"; Curley, "A Failed Green Future"; Fairchild and Weinrub, *Energy Democracy*; Gearon, "A Just Transition for the Navajo Nation"; Gearon and Johns, "Peabody's Declaration of Bankruptcy Is 'No Surprise': Navajo Tribal Members Demand Just Transition to a Sustainable Economy"; Jones et al., "Working toward Equity in Illinois's Clean Energy Future"; New York State, "Governor Cuomo Announces Green New Deal Included in 2019 Executive Budget"; UC Berkeley Labor Center, "CONFERENCE"; "Building a Cleaner Future Together."

[62] Interview 26, August 2019

[63] Barbier, "Rethinking the Economic Recovery: A Global Green New Deal"; Luke, "A Green New Deal."

[64] Mann and Wainwright, *Climate Leviathan: A Political Theory of Our Planetary Future*.

[65] Interview 25, July 2019

[66] City of Atlanta Mayor's Office of Sustainability, "Power to Change: Atlanta's Citywide Sustainability Initiative."

[67] Interview 25, July 2019

[68] Stafford, "Reed Touts Center as a 'green' Job Creator."

[69] Interview 2, March 2019; Interview 4, April 2019

[70] Youth Build is a federal program through the Department of Labor that is designed to help young people get their GED, teach construction, and then help them on career pathway in a field of their interest.

[71] Interview 36, September 2019

[72] Interview 2, March 2019; Interview 4, April 2019

[73] Interview 15, June 2019

[74] Interview 36, September 2019; There have since been efforts in Atlanta to train people in "green" fields, such as the Care and Conserve program, which places job trainees doing plumbing assessments and installing low-flow toilets, water efficient faucets, and more energy efficient water heaters. Over five weeks, training participants work as plumbers' helpers with a licensed plumber. In part, the program intends to encourage people to come to technical college and begin their plumbing certification. There has been a lot of organizing around the City of Atlanta Watershed Department given a consent decree that the EPA placed on the city in the 1990s which led to an enormous increase in the cost of water bills. See also

Sawin, Smith, and Smith, "Equity, Health, Resilience, and Jobs" on Atlanta's Green Infrastructure Strategic Plan; Interview 7, May 2019; Interview 8, May 2019.
[75] Interview 38, September 2019; importantly, neither of the two programs designed to train people in solar installation – at Lanier Tech and Savannah Technical College – serve Atlanta directly.
[76] Interview 38, September 2019
[77] Interview 38, September 2019
[78] "SK Battery America Commerce"; Gill, "With 2,000 Jobs Expected by 2025, SK Battery Holding Feb. 29 Job Fair"; Walton, "500 Jobs, $150 Million In Investment Coming To Whitfield County."
[79] Interview 38, September 2019
[80] Interview 36, September 2019
[81] Interview 36, September 2019
[82] Interview 36, September 2019
[83] Interview 36, September 2019
[84] Interview 36, September 2019
[85] Interview 23, July 2019
[86] Interview 36, September 2019
[87] Participant Observation, March 26, 2019
[88] Interview 33, September 2019
[89] Interview 6, April 2019
[90] Interview 33, September 2019
[91] Jones to Luke, "PhD Research," May 17, 2019.
[92] Jones to Luke.
[93] Interview 36, September 2019
[94] Interview 18, June 2019
[95] Interview 25, July 2019
[96] Interview 25, July 2019
[97] Laclau and Mouffe, *Hegemony and Socialist Strategy*.
[98] Participant observation, April 30, 2020
[99] Jones, Docket No. 42516: Georgia Power Company's 2019 Rate Case.
[100] Singh, *Black Is a Country: Race and the Unfinished Struggle for Democracy*, 68.
[101] Conrad, "Georgia Stand Up: Organizing for an Equitable Atlanta"; Immergluck, "The Beltline and Rising Home Prices: Residential Appreciation Near the Beltline Tax Allocation District and Policy Recommendations to Minimize Displacement."
[102] Atlanta Beltline Initiative, "Beltline Equitable Development Plan."
[103] Emerald Cities Collaborative, *Forum Session 1: Voices from the Field*.
[104] Falling off the grid was a term that came up often in my interviews, Jerry from the Technical Colleges explained that their programing targets individuals who have been dislocated from work and disadvantaged youth who "didn't finish school and they're out on off the grid, basically, they don't know that there's help for them."
[105] After initial skepticism, clean energy is also something the IBEW has more seriously committed to. A solar developer described that the apprenticeship and training committee for Local 613, "approved a budget to build a training lab, or for solar PV specifically. And so, we'll have a class of some sort that people can sign up to take or just as we hire on new people, we can take them there and train them in this lab." Interview 16, June 2019.
[106] Interview 15, June 2019
[107] Several city employees described the challenge of trying to negotiate contracts that challenged the status quo in any way. An airport employee described the enormous cost of putting in electric vehicle charging infrastructure. There was an initial plan to install 18 charging stations when the Public Service Commissioner called the mayor to complain about the lack of charging infrastructure at the airport. The mayor then promised 300 stations by the end of the year. It took three years to get it done, explained an airport employee, but the airport is on track to do it. Directing money to that project meant other sustainability initiatives were delayed because "it costs a crazy amount of money to do anything at the airport. That is exciting that we've got that many EV charging stations…. But it's like, I don't know why we aren't continuing with the energy efficiency…. So, there's this thing where it's either, it's money or it's time. So, if you got get something done quickly, you use a managing to general contractor, who's already been through the bidding process. He's kind of the on call. They charge up out the nose.… But that's just how it

works to get it done by the end of the year, which the mayor wanted, so you can use the money like that, but I can't have $10,000 to do this program that's going to generate this other stuff?"; Interview 32, September 2019
[108] Interview 36, September 2019
[109] Interview 32, August 2019
[110] Interview 7, May 2019
[111] Interview 6, May 2019
[112] Interview 5, April 2019
[113] Interview 5, April 2019
[114] Interview 39, October 2019.
[115] Interview 28, August 2019
[116] Interview 28, August 2019
[117] Interview 28, August 2019
[118] Interview 28, August 2019 Will further noted that employees want pensions and "Health care is the same way. Most folks will take a job even for less pay, if there's healthcare and that's can become attractive, so our industry's done a much better job. And it's almost an imperative if you're going to compete against anyone that's in the world…manufacturing or Georgia Power? Everybody's in that marketplace that you just almost cannot be considered a progressive employer unless you're" providing benefits."
[119] Interview 28, August 2019
[120] On the transformation of higher education simultaneous to the changes in job and training programs described here see: Cooper, *Family Values*. Alyssa Battistoni also argues that the greatest growth in "green" jobs in the future will be in low-carbon fields of healthcare, teaching, childcare, and eldercare. Notably, these "pink collar" professions traditionally held by women are underpaid and face on-going wage suppression through state-subsidized workfare. Battistoni, "Living, Not Just Surviving."
[121] Davis, *Women, Race & Class*; Tadiar, *Things Fall Away*; Tadiar, "Life-Times of Disposability within Global Neoliberalism."
[122] Katz, "Whose Nature, Whose Culture? Private Productions of Space and the 'Preservation' of Nature," 48.
[123] Interview 4, April 2019
[124] Baker, Rawlins, and Stein, "The Full Employment Mandate of the Federal Reserve: Its Origins and Importance"; Cowie, *Stayin' Alive: The 1970s and the Last Days of the Working Class*; Spriggs, "The Unfinished March for Jobs: Focus of U.S. Fiscal Policy Must Shift Back to Full Employment."
[125] Tony Mazzocchi, a labor leader in the Oil Chemical and Atomic Workers Union initially coined the term "just transition," to describe measures to compensate workers dislocated as a result of necessary environmental policy. The idea was put into practice through community-labor organizing around chemical plant closures in Louisiana in Cancer Alley, drawing attention to the devaluation of people's time from environmental toxins by bringing together environmental and occupational health. Minchin, *Forging a Common Bond: Labor and Environmental Activism during the BASF Lockout*. The more successful efforts to implement just transition policies in response to power plant closure across the U.S. have been negotiated between environmental, community, union, utility, and state agencies offer a range of benefits including payments to local governments to offset the loss of property taxes from plant closures and honoring the collective bargaining agreements negotiated by workers to provide re-employment elsewhere in a company, a pathway to retirement with full benefits, or retraining. The failure of training that was unable to retool dislocated workers in green jobs has received the most criticism, as Reba pointed out in the example of Appalachia that continues to haunt discussions of creating green employment.

Mazzocchi envisioned that retraining should allow four-years of tuition free education for a worker or their child, he recognizes the diversity of educational pathways and that education should be directed to more than employment. In his biography of the labor leader, Les Leopold narrates a discussion between sociologist Stanley Aronowitz and Mazzocchi. The former argues, "There's a strong ethical obligation that comes out of one section of the left. And I don't mean just the communist left—I mean, the socialist left, social democratic left. They really believe in work. They believe in work as redemption; work as obligation; work as necessary for personal development; work as giving back to the society." Mazzocchi agreed with Aronowitz's critique of Leftist politics, which are informed by what Postone might term the "traditional" Marxist interpretation that reads Marxist political economy from the standpoint of labor. Instead, technology might allow people, especially those in dangerous jobs, to work less. See: Leopold, *The Man Who Hated Work and Loved Labor*, 416–17.

[126] Boggs, *The American Revolution: Pages from a Negro Workers Notebook*, 46–47.

Notes to Chapter 7

[1] The PSC has limited authority over electric membership cooperatives, but also regulates natural gas, telephone, telegraph and radio companies within Georgia.
[2] William J. Barber, II, *Watch Live*.
[3] Hall, "Race, Culture, and Communications," 17; Gilmore, "Fatal Couplings of Power and Difference."
[4] Pohnan and Shober, "Tracking Decarbonization in the Southeast."
[5] Southern Company, "Planning for a Low-Carbon Future," 17.
[6] Koller, Goedhart, and Wessels, *Valuation: Measuring and Managing the Value of Comapnies*, 4.
[7] Georgia Public Service Commission, "Electric."
[8] "Home."
[9] Interview 38, September 2019
[10] Kruse, *White Flight: Atlanta and the Making of Modern Conservatism*.
[11] Cooper, *Family Values*, 19, 20. In many ways the the biography of the the Public Service Commissioner Lauren "Bubba" McDonald, traces this transformation. Commissioner McDonald was a representative in the Georgia State Assembly for 20 years as a member of the Democratic Party. He was appointed to the Public Service Commission to fill a vacated seat in 1998, voted out of office in 2002 and reelected on a Republican ticket in 2008 and 2014. He was the first statewide elected official in Georgia to endorse President Trump in 2016. See: Georgia Public Service Commission, "Lauren 'Bubba' McDonald, Jr."
[12] See for instance: Brenner and Theodore, "Cities and the Geographies of 'Actually Existing Neoliberalism.'"
[13] Nuclear Watch South, "Georgia General Assembly Votes to Sunset CWIP."
[14] U.S. Energy Information Administration, "Table HC1.1 Fuels Used and End Uses in U.S. Homes by Housing Unit Type, 2015."
[15] U.S. Energy Information Administration, "Table HC1.1 Fuels Used and End Uses in U.S. Homes by Housing Unit Type, 2015."
[16] Dallis, "History of the General Assembly of Georgia of 1907"; "The Great and Historic Legislature of 1907"; "Street Railways Under Commission"; "History and Mission of the Georgia Public Service Commission."
[17] "Gas and Light Increases Awarded"; Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 88; Wright, *History of the Georgia Power Company, 1855-1956*, 169–70.
[18] "'Accomplished by Methods Which Are Indefensible,'" 178.
[19] Harvey, *The Limits to Capital*; in relation to electricity see Harrison, "'Accomplished by Methods Which Are Indefensible'"; Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*.
[20] Harrison, "'Accomplished by Methods Which Are Indefensible,'" 178.
[21] Harvey, *The Limits to Capital*; Hightower, "New Concern for Utility: Rate Structure"; Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940*.
[22] Sharon Beder asserts that utilities have always had "natural allies in the banking sector" and on Wall Street where power companies were known as "'dividend machines' because they required such large amounts of investment and produced regular and reliable dividends." The profitability of utilities emerged due to the relationship with regulators that functioned to ensure the continual reproduction of this value relation into the future. See: Beder, *Power Play: The Fight to Control the World's Electricity*, 50. Utility holding companies combined utilities and issued new stocks, leading to massive devaluation in electric properties during the Great Depression. The Public Utilities Holding Company Act prohibited combinations of electric utilities that were not geographically contiguous or within the same state.
[23] Kihm et al note that "the rate of return is intended to compensate the utility only for its cost of capital. Since utility bond holders are secured by utility assets, equity holders are taking on the lion's share the utility's investment and operating risks, making an up-front investment in infrastructure that they will be compensated for over time." See: Kihm et al., "You Get What You Pay For: Moving Toward Value in Utility Compensation, Part 1, Revenue and Profit," 4.
[24] Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*.
[25] Georgia Power Company, "Annual Report 1947"; Georgia Power Company, "Annual Report 1971"; Taft and Heys, *Big Bets*, 249.

[26] Cater, *Regenerating Dixie: Electric Energy and the Modern South*; Cronon, *Nature's Metropolis: Nature's Metropolis: Chicago and the Great West*.
[27] Georgia Power Company, "Annual Report 1947," 15; U.S. Energy Information Administration, "Household Energy Use in Georgia: A Closer Look at Residential Energy Consumption."
[28] Georgia Power Company, "Annual Report 1947"; Georgia Power Company, "Annual Report 1971"; Taft and Heys, *Big Bets*, 249.
[29] Taft and Heys, *Big Bets*, 276, 249.
[30] Cater, *Regenerating Dixie: Electric Energy and the Modern South*, 1980.
[31] The Georgia Power Project, "A City-Owned Power Company?"
[32] Huey and Townsend, "Power Group Rips Rate Hike."
[33] Taft and Heys, *Big Bets*, 260. Cater offers a different interpretation of Georgia Power's history and observes the way in which the utility's growth consistently "transformed government—at the local, state, and federal levels—into a protective shield, a generous benefactor, and a channel through which private energy corporations could capture public resources." Cater, *Regenerating Dixie: Electric Energy and the Modern South,* 8. The company also distributed low-cost power generated from TVA construction into its service territory.
[34] Taft and Heys, *Big Bets*.
[35] Bakke, *The Grid: The Fraying Wires between Americans and Our Energy Future*; Beder, *Power Play: The Fight to Control the World's Electricity*; Hirsh, *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*.
[36] Georgia Public Service Commission, "Electric."
[37] Subject 515-3-4 INTEGRATED RESOURCE PLANNING, 515.
[38] Interview 35, September 2019
[39] Interview 35, September 2019
[40] Southern Company, "Plant Vogtle 3 and 4." The Department of Energy under the Obama Administration guaranteed $8.3 billion in loans, increased to $12 billion under the Trump Administration as the estimated cost of the project soared to $28 billion. Mirshak, "Energy Secretary Moniz Visits Vogtle to Finalize Loan Guarantee"; Plumer, "The U.S. Backs Off Nuclear Power. Georgia Wants to Keep Building Reactors."; U.S. Department of Energy, "Secretary Perry Announces Financial Close on Additional Loan Guarantees During Trip to Vogtle Advanced Nuclear Energy Project."
[41] The Atlanta Journal-Constitution Staff Reports, "Timeline."
[42] The Atlanta Journal-Constitution Staff Reports.
[43] Edge, "Commission Approves Continued Construction of Nuclear Power Plant Vogtle Project; Reduces Company Revenue Requirement by $1.7 Billion."
[44] Commissioner Bubba McDonald quoted in Edge, "Georgia Public Service Commission Reduces Nuclear Construction Cost Recovery Fee."
[45] Edge, "Commission Approves Continued Construction of Nuclear Power Plant Vogtle Project; Reduces Company Revenue Requirement by $1.7 Billion."
[46] Mirshak, "Energy Secretary Moniz Visits Vogtle to Finalize Loan Guarantee"
[47] For explanation of the ways in which debt continues to be carried on electric bills see Harrison, "The Historical–Geographical Construction of Power"; Harrison and Popke, "'Because You Got to Have Heat'-The Networked Assemblage of Energy Poverty in Eastern North Carolina." Geographers and others have also described how people embodied personal, city, and state debt after the financial crisis as the social reproductive systems that provide care were eliminated with austerity or homeowners and retirees struggled to manage over-valued mortgages and diminished pensions. See: García-Lamarca and Kaika, "'Mortgaged Lives'"; Katz, "In the Long Run We Are All Dead Review"; Kentikelenis et al., "Health Effects of Financial Crisis"; Peck and Whiteside, "Financializing Detroit"; Pulido, "Flint, Environmental Racism, and Racial Capitalism"; Pulido, Kohl, and Cotton, "State Regulation and Environmental Justice"; Tadiar, "Life-Times of Disposability within Global Neoliberalism."
[48] Tadiar, "Life-Times of Disposability within Global Neoliberalism," 26.
[49] Tadiar, 28.
[50] Nuclear Watch South, "Georgia General Assembly Votes to Sunset CWIP."
[51] In Atlanta, where urban air quality is a significant concern due largely to the enormous number of cars on the road, the use of air conditioning has been shown to increase indoor air quality. It can "reduce indoor ozone levels by two-thirds or more. By removing moisture from the air, air conditioning keeps mold and dust mite levels at a minimum, which decreases health risks faced by individuals living in the home." See:

Creech and Brown, "Energy Use and the Environment," 194; Franklin et al., "Lights out in the Cold: Reforming Utility Shut-Off Policies as If Human Rights Matter."
[52] Nuclear Watch South, "Georgia General Assembly Votes to Sunset CWIP."
[53] Interview 11, May 2019
[54] Tadiar, "Life-Times of Disposability within Global Neoliberalism," 30.
[55] Interview 35, September 2019
[56] Brown, "Low-Income Energy Burdens in the Southeast: Solutions through Community, Business, and Policy Engagement."
[57] Creech and Brown, "Energy Use and the Environment," 192.
[58] Creech and Brown, 193.
[59] Brown, "Low-Income Energy Burdens in the Southeast: Solutions through Community, Business, and Policy Engagement"; Drehobl, "Explaining the Unique Energy Burden of Low-Income Households."
[60] Edge, "PSC Approves Agreement to Resolve Georgia Power 2013 Integrated Resource Plan and Expands Use of Solar Energy."
[61] Bluestein, "Lefties and Libertarians Unite against Common Foe"; Shapiro, "Green Tea Coalition Aims to Bridge Partisan Divide."
[62] Howard, "Georgia Power Drops Proposed Solar Fee"; Kormann, "Greening the Tea Party"; Lydersen, "This Green Tea Party Star Is Fighting for Solar"; Martinez, "The Sun Also Rises in the Southeast"; Toke, *Low Carbon Politics*, 101–4.
[63] Owei, "The Changing Context of Energy Generation and Supply: The Case Study of Georgia," 265.
[64] Leiserowitz et al., "Politics and Global Warming, November 2019."
[65] Groom and Valdmanis, "Conservative Push for Solar Is Backed by Usual Green Advocates"; Kormann, "Greening the Tea Party."
[66] Evangelical Environmental Network, "Who We Are: Beliefs"; "Georgians for Energy Freedom."
[67] Bond, PSC Docket 42310, Docket 42311 - Day 1 - 05/13/19: Docket 42310, Georgia Power Company's 2019 Integrated Resource Plan.
[68] Collier, "Summary: Expert Witness SOLAR Installs in Georgia," May 20, 2019.
[69] Bond, PSC Docket 42310, Docket 42311 - Day 1 - 05/13/19: Docket 42310, Georgia Power Company's 2019 Integrated Resource Plan.
[70] Bigalke, PSC Administrative Session.
[71] Margolis, "How Atlanta Plans to Get to 100% Green Energy by 2035."
[72] Interview 33, September 2019
[73] See Chapter Four; Southern Company, "Southern Company - Information for Investors - Financial Information - Webcasts & Presentations."
[74] Interview 25, July 2019
[75] Interview 35, September 2019
[76] Georgia Power, "Pricing and Rate Plans."
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[78] Interview 18, June 2019
[79] Kempner, "Georgia Power Bills Could Rise."
[80] "Fight The Hike." The coalition partners included Sankofa Church, Mount Welcome Missionary Baptist Church, Malcolm X Grassroots Movement, Pan African Orthodox Christian Church, SisterCARE Alliance, and the Georgia Conservation Voters.
[81] Solar Energy Industries Association, "Net Metering."
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[83] Morehouse, "Georgia Power Coal Ash Plan Mirrors Conditions That Led to Duke Spills."
[84] Georgia Chapter of the Sierra Club, *Live from the Athens Town Hall on the Georgia Rate Case #FighttheHike*.
[85] Owens, "Striking New Data Shines Light on Statewide Affordable Housing Crisis."
[86] Georgia Chapter of the Sierra Club, *Live from the Athens Town Hall on the Georgia Rate Case #FighttheHike*.
[87] See for instance: Drehobl and Ross, "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities."

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[89] Smith.
[90] Gilmore, "Abolition Geography and the Problem of Innocence."
[91] Kamau, Docket No. 42516: Georgia Power Company's 2019 Rate Case.
[92] Luke, Docket No. 42516: Georgia Power Company's 2019 Rate Case.
[93] Brown et al., "Low-Income Energy Affordability," 27, 53–54.
[94] Williams, "Georgia Public Service Commission Set to Vote on Georgia Power Rate Hike."
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[96] Docket No. 42516: Georgia Power Company's 2019 Rate Case. Consideration of Commissioner Advisory Staff's Recommendation.
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[102] Weaver.
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[110] Robertson and Wainwright, "The Value of Nature to the State," 899.
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[2] Gilmore, "Fatal Couplings of Power and Difference," 16.
[3] Fortunati, *Arcane of Reproduction*; Mitchell, Marston, and Katz, "Life's Work"; Tadiar, *Things Fall Away*; Tadiar, "Life-Times of Disposability within Global Neoliberalism."
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