# POWER CIRCUITS: BRINGING CONTESTATION TO BEAR ON ENERGY DEMOCRACY AND THE U.S. ELECTRICITY SECTOR

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A THESIS

Presented to

The Faculty of the Department of Political Science

Colorado College

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Arts

By

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April 2020

# POWER CIRCUITS: BRINGING CONTESTATION TO BEAR ON ENERGY DEMOCRACY AND THE U.S. ELECTRICITY SECTOR

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## Abstract

In the post-WWII era, the electricity sector in the United States enjoyed decades of relatively uncontested politics. So long as customers received reliable current at reasonable rates, they were content to allow the industry to persist partitioned off from public contestation in sector-specific, expert-staffed regulatory systems. But as climate change, grid resiliency, market alterations, and technological developments approach the electric sector, publics are increasingly confronting electricity providers and distributors. Many scholars interpret these calls via the term "energy democracy" and subsequently have crafted myriad frameworks with which to analyze energy democracy and its implications. This thesis takes up energy democracy in the context of three case studies—in Pueblo, Colorado, north central New Mexico, and southwestern Colorado—that involve communities agitating around electricity issues. Relying on qualitative interviews as well as gray literatures such as newspaper and government documents, this thesis calls for energy democracy to embrace contestation as a transcending theme to the varied frameworks. If energy democracy binds itself to a co-constitution of political and technical change, then it must commit to the end of depoliticized electricity and the opening of the sector to community contestation.

ACKNOWLEDGEMENTS

When I embarked on this project for my State of the Rockies research in spring 2019, I had no conception that it would culminate in three case studies and a thesis. Thus, appreciation is due first to those at the heart of this project. To Corina McKendry, for providing me with this research opportunity, guidance ranging from interviews to academic conference submissions, and robust comments on draft after draft. To my fellow SotR fellows for comradery and the occasional rant. To Cyndy Hines for all the behind-the-scenes SotR work. And to the State of the Rockies program for funding me and my research.

This thesis would not be possible without the generous time and information offered by interviewees. I interviewed people everywhere from a car dealership to the neighborhood diner. They were gracious, and most importantly, they trusted my discretion. This thesis also relied heavily on local newspapers, a sector that sustains layoff after cut after layoff. We owe you a better way. Thanks especially to the *Pueblo Chieftain, Taos News,* and *Durango Herald*.

Beyond the immediate thesis work, I am grateful for the many other aspects of life that have comprised my time at Colorado College.

To student government, for allowing me to care too much. Worner 205 will always hold a fond place in my CC memories. And to Max for your friendship and counsel. Cheers to student voice and student power.

To my 1111 housemates for a loving home that understands the joy of food. And to the honorary member of the house, Melanie, for reminding me to have fun through it all.

To the Boettcher Foundation, not only for the immense financial gift of a Colorado College education, but for four years of support and guidance. To the fellow CC Boettchers and Maria, for block breaks and dinners and more.

To my family, for 22 years of constant support and the willingness to listen. And for allowing me to pursue a liberal arts education at a time when the world obsesses over technology and engineering and pre-professional paths.

To Colorado College, where it all happened.

I write this on April 4, 2020 in the midst of a worldwide COVID-19 pandemic. The global death toll stands over 60,000; more than 7,800 have died in the United States. With hopes for a time in which we can share public spaces again and a politics that better cares for the most vulnerable among us.

Ethan Greenberg, April 4, 2020
Colorado Springs, CO

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED

UNAUTHORIZED AID ON THIS THESIS

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Should the world achieve a carbon-free economy, it will likely be dependent on the transition from direct fossil fuel usage to electricity usage. That transition, often called beneficial electrification, could render a carbon-free economy if it is paired with a simultaneous transition toward renewable electricity generation, thus facilitating a net decrease in emissions. One projection forecasts full electrification of the U.S. transportation, commercial, and residential sectors would double electricity use by 2050 and reduce greenhouse gases by 70 percent (Environmental and Energy Study Institute n.d.). Beneficial electrification, therefore, places entities in the electricity sector in a unique position. In contrast to countless other historically incumbent energy entities, from natural gas producers to oil barge operators, whose futures fall on a spectrum of soon-to-be erased to eventually extinct in a carbon-free economy, the electricity sector is not inherently destined for demise. Indeed, while fossil fuel producers and support services are at best stopgap measures and at worst outright barriers to a carbon-free economy, the electricity sector has an immensely critical future.

To say that electricity has a place in the future, however, is not to say that the sector will avoid critique and change. Although the electricity sector in the United States enjoyed a depoliticized and uncontested landscape for the second half of the 20th century, the first fifth of the 21st has brought contestation to bear. Between climate change, technology advancements, and market developments, publics are no longer sitting back and allowing sectoral experts, utilities, and regulators to make policy decisions for them. Scholars, in a reflection of these trends, have developed theories and frameworks for what they call “energy democracy” to understand the new demands placed on the sector. These theorizations have varied in what exactly constitutes energy democracy; one scholar even wrote an entire article to make sense of

the variations (Welton 2018). This thesis does not take issue with these variations, but rather argues that they all share a common cornerstone: contestation. Transcending the various demands and policies that arguably constitute energy democracy is the insistence by communities that electric issues can no longer be partitioned off from politics or public debates. The three case studies that will be examined here, then, illustrate different ways that this cornerstone of contestation manifests itself.

This thesis utilizes case studies of three service providers in Colorado and New Mexico to both demonstrate the increased contestation aimed at electricity as well as the various ways in which such contestation manifests itself across contexts and provider types. In Pueblo, Colorado, the case study takes up a campaign for municipalization, or the process of switching from an investor-owned utility to a municipally-owned utility. In northern New Mexico, Kit Carson Electric Cooperative (KCEC) receives attention because of its separation in 2016 from Tri-State Generation and Transmission. Finally, the third case casts its net to southwestern Colorado and the La Plata Electric Association (LPEA), another rural electric cooperative, who is in the midst of negotiations with Tri-State for potential separation. Each case provides a context for how contestation manifests in this newfound pattern of pressure in the electricity sector.

This thesis will first provide a brief backgrounder on the electricity sector in the United States before reviewing relevant literatures about both electricity depoliticization and energy democracy. After the theory, a brief methodology section provides information about how research was conducted for the three cases. Next, the case studies will come in the order addressed above, followed by a discussion section to explore syntheses and divergences between the three locations. Finally, a conclusion will work to close the circuit while floating potential routes for future research.

## II. A Brief Review of Electricity in the United States

The electricity provisioning sector involves complex technological, organizational, and political apparatuses; this section simply aims to provide a basic overview of functions and organizational types. It will first focus on the four stages of electricity provisioning, and then address the types of entities that perform those activities.

The electric provisioning sector involves four primary roles. First, the generation of electricity; second, the transmission of electricity, which usually involves high-voltage lines connecting a generation site (hydroelectric dam, power plant, etc.) to a substation near the customer; third, the distribution of electricity, which involves converting the high voltage transmission electricity to lower voltage for distribution on electric lines to households and businesses; and fourth, what some call operations and others call retail, which denotes the duties of billing, customer service, line maintenance, etc. To be a vertically integrated utility is to provide all four services, while some utilities, as we will see below, only operate distribution and retail. Importantly, this overview operates under the historical hub-and-spoke paradigm of electricity, in which generation occurs at large, centralized facilities and is then transmitted and distributed. Decentralized generation (i.e. community solar) can change this paradigm; however, this thesis has neither the space nor expertise to provide a full theorization of the technological and organizational changes involved in such a paradigm shift.

As alluded to above, different utilities have different structures and operating principles. In the United States, there are three general modes: investor-owned utilities (IOUs), rural electric cooperatives (coops), and municipal or public utilities (munis). Investor-owned utilities are private, for-profit entities governed by shareholders and regulated by state public utility/service commissions, as well as the Federal Energy Regulatory Commission (FERC) for certain

activities. IOUs operate on vast economies of scale; they tend to be much larger than either munis or coops and more often vertically integrated. Municipal or public utilities are government entities, although structures vary—in some cases, the town or city council serves as the oversight body while in other cases a separate utility board conducts oversight. In most states, munis receive the least scrutiny from state regulatory bodies because munis are already accountable to government processes and elected officials, just at a more local jurisdiction. Finally, rural electric cooperatives are private, non-profit entities governed by boards elected from the service territory. Depending on the state, coops may face varying levels of regulatory oversight from public service/utility commissions (Farrell, Grimley & Stumo-Langer 2016). An important addendum for this thesis on the cooperative category is generation and transmission (G&T) cooperatives. In common parlance, a rural electric cooperative usually refers to a distribution and retail cooperative. Of the almost 900 cooperatives in the United States, the vast majority, 831, are distribution coops (National Rural Electric Cooperative Association 2019). The remaining balance are G&T cooperatives, which are comprised of member distribution cooperatives and operate the generation facilities and transmission lines that then carry electricity to the member distribution coops. In other words, G&Ts are coops of coops.

Although a robust historical inquiry about the beginnings of the electricity sector is beyond the scope of this thesis, a brief narrative informs context for future discussions of contestation and (de)politicization. After Thomas Edison opened his Pearl Street Station in New York City in 1882, cities and towns "quickly sought to encourage power production within their jurisdictions" (Kwoka 2007, p. 3-4). Some did so by seeking and granting franchises to private entities for electricity provision, while other municipalities built and operated their own systems. By 1900, over 2,500 private and 700 municipal public electric utilities existed across U.S. cities

and towns, and they often engaged in fierce competition. Some large cities like Chicago even granted multiple, competing franchise agreements for duplicative territories and stepped back to watch the utilities compete (Kwoka 2007). However, a few years after the turn of the century, two points of consensus emerged: first, that competition might actually drive up prices because of the high capital costs of electricity provision (i.e. duplicate poles, lines, etc. required by competing utilities meant competition did not equal efficiency); second, while competition might drive up prices, a lack of competition could result in price gouging to the point where a municipality would contemplate a takeover. The developments stemming from these consensus points will be addressed in the following section.

Although urban residents in the early 20th century were subject to the battles between municipal and investor-owned utilities, they by and large enjoyed widespread electrification. From 1900 to 1930, the fraction of non-farm households with electricity rose from 5% to 85% in a steady march toward universal coverage (Lewis & Severnini 2017). Indeed, Deller et al. (2009) write that by the 1930s nearly 90% of U.S. urban dwellers had electricity. Meanwhile, their rural counterparts persisted with lantern light and washer boards— 90% of rural homes were without power through the 1920s (Deller et al. 2009). What's more, rural residents had seen very little progress in electrification, and they were powerless to do much about it.

Neither municipal nor investor-owned utilities devoted resources toward rural areas, each for their own reasons. Municipal utilities were worried about jurisdiction issues. They also had no interest in creating larger public power districts that extended beyond their constituents, especially if extending to rural areas would drive up rates for municipal residents (Brown 1980). Investor-owned utilities, on the other hand, could expand but saw little financial incentive to do so. The cost of infrastructure—running tens of miles of line between widely spaced meters— for

a limited benefit of a few farmhouse customers dissuaded profit-driven IOUs. As one industry publication described, "[a] mile of distribution line can serve 50 to 200 customers in a city; in the country the average is three customers to a mile" (General Electric Digest, 1925, cited in Lewis & Severnini 2017, p. 4). Often, the IOU would respond to a request for rural service by asking the requestor to pay for the cost of running the wires, which was prohibitively expensive for most farmers and rural dwellers (and, notably, was not required of urban customers) (Brown 1980). After taking stock of multiple struggling or failed rural initiatives, Brown concluded "by 1930 it was clear that farmers were not likely to receive service within a reasonable time through the aegis of private enterprise" (Brown 1980, p. 12). In other words, profit motives alone had failed to electrify anything but urban concentrations.

This dynamic, and the resulting disparity between rural and urban electric provision, attracted national political attention and resulted in various executive orders and pieces of New Deal legislation in the 1930s, including the establishment of the Tennessee Valley Authority and the Rural Electrification Administration (REA). Initially, the newly-formed REA attempted to provide loans or support to IOUs to incentivize their expansion into rural areas. But those efforts either outright failed to galvanize IOUs towards rural provision, or IOUs would only propose to offer service to larger farms with higher load capacity rather than universal service (Brown 1980). Thus, REA focus shifted to the cooperative model (Johnson & Lewis 2017).

Cooperatives were not a novel concept in the West; business and agricultural coops had existed for some time, and rural Westerners were widely interested in electrification via cooperatives. The degree to which rural electric cooperatives were grass-roots efforts versus government programs remains contested. But because the REA had neither the manpower nor political clout to micromanage Western rural electrification, this paper agrees with those

historians that found “Western residents rather than New Deal administrators initiated most of the region’s rural electrification projects” (Cannon 2000, p. 138). REA literature from the time even asserted, “healthy cooperatives cannot be called into existence by external promotion. They have to develop from the initiative of the people who are going to do the cooperating” (Rural Electric Administration 1937).

People took initiative—by 1938, 350 cooperative projects supported by the REA formed in 45 states. By the beginning of 1944, 45% of farms had electricity, and by 1953 electrification had reached all but the most remote farms (Brown 1980). Lewis and Servernini (2017) provide a comprehensive view that asserts electrification among American farm households increased from less than 10 percent to nearly 100 percent over a three-decade span, 1930-1960. In this way, the REA and rural cooperatives met their fundamental goal of rural electricity provision. But early proponents of public and cooperative electric power also “sought to expand democracy and promote social betterment through massive public power systems” (Brown 1980, p. 122). The following section will take on those ambitions.

## III. Theoretical Underpinnings

### *Depoliticization*

By the end of World War II, electricity was nearly omnipresent and yet simultaneously had become invisible. Despite the ambitions noted above, both IOUs and coops—the two incumbent forms of energy for the case study subjects—trended toward a lack of contestation. Indeed, "one of the great triumphs of modern society is that we've hidden the infrastructure. Nobody understands where electricity, gas, or water come from" (American Academy of Arts and Sciences Alternative Energy Future Project 2011). Not only was the infrastructure physically hidden, but the decision-making and political processes were similarly cordoned off. With this invisibility, the electricity sector has been depoliticized and removed from contested landscapes, with the side effects of disempowered communities and minimized public engagement (McCauley and Stephens 2017). By depoliticization, this thesis means the act of "pushing decisions away from contested, formal political debate" (Newman 2009, p.158-59).

Numerous factors contributed to this post-war era in which few public spotlights were placed on the electric sector. Newman writes one depoliticizing tactic is to "remove decisions from the political arena and transfer them to markets" (Newman 2009, p. 159). Another depoliticization strategy "may attempt to depoliticize decisions by representing them as technical and by transferring decision-making to 'less obviously politicised arenas'" (Newman 2009, p.159 citing Hay 2007, p. 89). Indeed, the complexity of the electricity sector, and its accompanying regulatory apparatuses, is widely recognized as a depoliticizing tendency (Szulecki 2018). Hoicka and MacArthur (2019) write "electricity infrastructure is often depoliticized, left to the technical experts and relegated to a solely technical matter of 'keeping

the lights on.'" In addition to the technical excuses, IOUs and cooperatives have distinct histories that contextualize discussion on (de)politicization. I will first address IOUs followed by coops.

As the previous section indicates, in the first decade of the 20th century, investor-owned utilities (IOUs) began to sense shifting ground and increasing contestation. The model of duplicate competition, in which multiple IOUs held franchise to the same area, was costly and wasteful. The utility business was so capital intensive, between the generation facilities and the distribution infrastructure of poles and wires, that overlapping service was foolish. Without competition, however, cities and towns saw IOU rates, and associated profits, skyrocket in ways unacceptable to the consumer, thus increasing the likelihood of cancellation of the franchise and the formation of a municipal utility. Indeed, as Kwoka (2007, p. 4) writes, "where competition did *not* exist, profitability often rose to the point where privately-owned utilities began to fear takeover by municipalities" (italics in original). In Chicago, Edward Dunne won the 1905 race for mayor of Chicago on an "Immediate Municipal Ownership" platform (Welton 2016). Proponents of municipalization in the early 20th century hoped "it would lower electricity rates and raise living standards, end bribery of city officials, and increase public participation in local government" (Welton 2016, p. 286). Suffice to say, contestation around electric utilities confronted IOUs.

Aware that both public agitation and municipal utilities were threatening their future positions, IOUs began to shift their approach. To satisfy the Progressive Era distaste for unregulated monopolies, IOUs advocated for state public utility/service commissions as their regulatory body. These commissions would theoretically ensure that IOUs would not gouge customers with unnecessary rate hikes while assuring IOUs sufficient revenues. Although the strategy was almost immediately seen by some as an IOU ploy – one scholar wrote in 1914 that

"PUCs are primarily organs of the public utility interests to protect themselves from the mosquito bites of rampant democracy"—the adoption of this type of commission spread rapidly (Wilcox 1914, p. 75). Utility/service commissions first arose in New York and Wisconsin in 1907, and in a sign of the effectiveness of IOU advocacy, by 1914, 45 states had public utility/service commissions, and by 1921, every state had a utility/service commission (Oppenheim 2016; Hess 2011). Under the regulatory framework of these commissions, IOUs could be granted territorial monopolies that extended beyond municipal boundaries. IOUs could then pursue economies of scale which, along with widening electric demand during the first half of the 20th century, allowed IOUs to cement their position as the primary providers of electricity in the U.S. (Defeuilley 2019).

The public utility commissions led to what has been dubbed the "Regulatory Compact" which had depoliticizing effects on the industry (Oppenheim 2016). This compact refers to the arrangement in which a public authority (public utility/service commission) grants security to private investors in the form of monopolies and guaranteed profits and in exchange the private entity must provide universal public service with just and reasonable rates. In other words, the Regulatory Compact offers security to capital in return for cost-sensitive universal electric provision. The Compact operates with at least two fundamental guideposts (LaBelle 2017). First, long-term infrastructure (such as electric systems) requires a stable regulatory environment needed to maximize profits and lower costs for ratepayers. Second, because democratic environments may not offer this stable regulatory environment (i.e. democracy's mosquito bites), a regulatory entity is established to ensure an apolitical environment persists (LaBelle 2017). This Compact (and any governmental outsourcing of decision making) shifts focus from political

actors, oftentimes elected, who work through government creating policy, to sectoral experts, oftentimes appointed, creating regulations within a governance structure (LaBelle 2017).

As the Regulatory Compact would predict, more than two-thirds of the state public service/utility regulatory commissions are appointed rather than elected (National Conference of State Legislatures 2019). In other words, the past century of electricity provision saw the sector partitioned from participatory politics in the name of operational efficiency. The "Regulatory Compact" not only appealed to IOUs but also was accepted by American society. LaBelle even calls it a "social-political agreement" (2017, p. 617). Americans under IOU service territories were willing to outsource much of the decision-making of electricity generation, transmission, distribution, and maintenance, albeit with some oversight by public utility/service commissions, to what are essentially long-term private contractors: investor-owned utilities.

For those under rural electric cooperatives rather than IOU service territories, they faced a different context of depoliticization. While rural electric distribution cooperatives might have higher theoretical potential for political contestation, in practice coops also face depoliticizing winds that manifest themselves differently. The review above indicates that the intent of rural electric cooperatives was first and foremost to provide electricity to places that had no clear alternative path towards electrification, but many of the proponents of rural electric cooperatives during the 1920s and 1930s also saw cooperative's local democratic attributes as a significant additional benefit. Brown's statement bears repeating—he writes that early proponents "sought to expand democracy and promote social betterment" through rural electric cooperatives (Brown 1980, p. 122). In similar fashion, Cannon (2000, p. 158) stresses that the REA did not force coops onto communities; rather, the REA only provided financial loans when it saw a serious grassroots effort and that "committees of westerners at the grassroots level participated

significantly in the process." Cooperatives even call their customers member-owners because they were technically both members and owners under the cooperative model. Rural residents were widely receptive, and thus began the cooperative story.

Despite these rosy reviews of initial intentions and formations, rural cooperatives have struggled to realize this democratic potential. Indeed, Jeter, Thomas, and Wells (2018, p. 364) write that "RECs remain hobbled by governance problems." They add, "from the beginning, RECs suffered from serious, recurring corporate governance problems that caused them to fall short of their founders' hopes. Too often they operated less as little republics than as small fiefdoms under the thumb of self-perpetuating, virtually self-appointed boards of directors" (390).

Jeter, et al. allude to the primary depoliticizing force for rural electric cooperatives: uncontested elections and their byproduct, low voter turnout and low general engagement. In one analysis of USDA data, 72% of coops averaged a turnout of less than 10% of member-owners (Grimley 2016). The worst-case scenarios are truly worst case: Jackson Energy Cooperative in Appalachian Kentucky went 71 years without a single contested election (Grimley 2016). Many anecdotes of uncontested elections are accompanied by reports of self-dealing and promotion by incumbents, vague and inconsistent election rules, and inaccessible bylaws. Uncontested elections have wide-ranging negative impacts. Of course, the most immediate is to delegitimize the democratic process and perpetuate apathy from incumbents and community members alike. In addition, if members do not hear about elections that would otherwise serve as a ripe opportunity to educate and involve oneself in cooperative business, their knowledge about their membership falters, as does any other type of involvement. The Kit Carson Electric Cooperative, one of the case studies for this paper, went five years without a quorum at their annual meeting

even though quorum requires just 459 member-owners in attendance from a member base of more than 22,000.

Uncontested elections also have severe consequences on board demographics. The Rural Power Project examined records of 313 cooperatives in a 13-state region in the American southeast and found that of the just over 3,000 elected board members, over 90% are men and 95% are white in a region where the population is 69% white (Rural Power Project 2016). Still other observers focus their critiques on coop equity and the lack of dividends offered to member-owners from such equity (Cooper 2008). Coops are approaching or have celebrated their eightieth birthdays and have accumulated significant equity that could be returned to members via dividends. When coops fail to do so, these observers argue, further partitions cooperatives away from their member-owners and perpetuates perceptions of cooperatives as self-promoting. This paper will not investigate these arguments at length; rather, their inclusion is solely meant as a demonstration of the many factors contributing to depoliticization and lack of contestation in the cooperative realm.

These depoliticizing forces, both those sector-wide and provider-specific, persist as challenges. Across the industry, the highly technical nature of electricity provision is cited as sufficient rationale to keep policy decisions in the realm of sectoral experts. Then, within the various types of providers arise distinct, but related, forms of depoliticization. However, a variety of recent politicizing countertrends are flowing to a confluence located at the intersection of contested electricity, climate action vis-a-vis renewable energy, and local control. Energy democracy gives a framework to address these developments.

*Energy Democracy*

As Miller, Richter, and O'Leary (2015, p. 32) write, "having operated largely out of the public eye for decades, energy policy institutions today confront a new reality: publics increasingly are attentive to energy choices." Climate change, along with changing technology and wholesale characteristics, alters and confounds a depoliticized, uncontested energy sector. Indeed, Taminiau et al. (2019) point to four converging factors that problematize uncontested electricity: energy users want more choice in their supply and service; rising concern about climate change; growing fears about the quality of service, especially in the face of climate-caused weather events; and a desire to take advantage of new technologies and business models. Suddenly, a centralized hub-and-spoke model of electricity provision is not the only, nor always the best, option, even if that model still claims hegemony. Likewise, suddenly decisions about types of generation are value-laden in the context of pressure to lower carbon outputs. The confluence of increasing contestation and emerging technologies in the face of both social and environmental threats from a changing climate have led scholars to a new vocabulary to understand energy and electricity transitions. This article will take up one of those frameworks, energy democracy, to understand the increased contestation and the resultant campaigns and agitation.

Energy democracy adopts the narrative above about depoliticization and theorizes a different landscape. Szulecki (2018, p. 27) writes "the idea of 'energy democracy' needs to be seen… in terms of the demand for increased accountability and democratization of a sector that was previously not seen as requiring public involvement and was (is) most often depoliticized." Theorists of energy democracy make an explicit and necessary interpretation about energy transitions: the transition does not solely introduce or involve technical and market changes but

rather can and should see itself as a concurrent social and political phenomenon. This is not guaranteed—the possibility remains for incumbent giants, from oil companies to energy providers, to pivot their operations and fuel sources, which may reduce emissions but would not induce any major changes to social or political arrangements. As Burke and Stephens (2018, p. 79) write, "if governed largely to preserve existing power relations, the renewable energy political economy may replicate existing dynamics of power." Theorists see energy democracy as the counter to an incumbent-driven transition by proposing a "co-constitution" of energy and political change (Szulecki 2018, p. 33). Thombs (2019, p. 60) writes "energy itself is not a thing separate from the social processes that produce, transform, and use it. Rather, its production and use are embedded within structures and symptoms of social power." Consequently, Healy and Barry (2017, p. 452) write, "a just energy transition is intensely political—not simply a technological or indeed a sociotechnical matter. Indeed, since it is characterized by issues of power, distribution of and access to resources, political economy, and so on, it can be described as a deeply political struggle."

Energy democracy should also be seen not only as a response to real-time political development, but also as a scholarly response to a field dominated by technocratic methods. Until the mid-2010s, energy literature at best sidestepped, and at worst willfully ignored, the social and moral implications of energy and the energy sector. One 2014 meta-study analyzed 4,444 academic articles published in the three leading energy journals—*Energy Policy*, *The Energy Journal,* and *Electricity Journal*—between 1999 and 2013 (Sovacool 2014). It found "only 12.6 percent of articles utilized qualitative methods and less than 5 percent of citations were to social science and humanities journals" (Sovacool 2014, p. 1). Thus, energy democracy works to provide language to both those on the ground and in the ivory tower.

Having laid the foundation that energy democracy sees a co-constitution of technical and social sciences, theorists of energy democracy then build its framework. The first building block is a recognition that by democracy, most energy democracy theorists are not obsessed with what Welton calls "a Schumpeterian emphasis on voting as the central act of democratic participants" (2018, p. 590). Instead, theorists are focused on what she calls "methods of citizen-state interaction," especially with "subpolitical" entities rather than, say, Congress or a state legislature (2018, p. 591). The energy sector is especially ripe for such subpolitical action because, as we have seen above, the subpolitical is the heart of energy politics and regulation. Welton writes "energy politics confounds electoral politics… rarely do politicians pass legislation making the 'hard' decisions over which many in the energy field disagree" (2018, p. 591-592). Instead, "they often leave to energy bureaucrats decisions over how to achieve the (often-divergent) goals of abundant, affordable, and clean energy" (592). Indeed, utilities, cooperatives, and public utility commissions across the nation rummage in the immense regulatory breadth that legislation and the Regulatory Compact have granted them. Energy democracy pounces on this subpolitical arena that has avoided contestation for decades.

With this citizen-state interpretation of democracy and the resultant spaces for application, energy democracy unabashedly stakes its claim next to democracy and its associated potential. For Szulecki, democracy provides legitimacy, which he notes is "in short supply in technocratic decision making," problem solving, and the process of making citizens (in this case what Szulecki calls the energy prosumer—both producing and consuming energy) (2018, p. 28). These, in turn, improve the quality of decisions "by broadening the stakeholder group and thus increasing the chance that policies indeed are for the *common* good" (2018, p. 30, italics in original).

Beyond the pillars of energy democracy theory that assert a co-constitution of energy and social science as well as the subpolitical conceptualization of democracy, the theory begins to diverge. Energy democracy can be considered as an analysis for either/both the means and the end, the process and/or the outcome. Szulecki proposes that energy democracy "has two meanings: it either denotes the normative goal of decarbonization and energy transformation, or it describes already existing examples of decentralized and mostly bottom-up civic energy initiatives" (2018, p. 23). Similarly, he adds, "while energy democracy, as a policy goal and a certain ideal type of socio-technical arrangement, is a quasi-utopian idealization, energy democratization – the political process altering the industry and influencing sociopolitical institutions– is already taking place" (2018, p. 35).

Welton is more forceful in her analysis of the divergence. She writes "exactly how the 'democratization' of energy might proceed remains unclear. Indeed, the concept of 'energy democracy' has taken on significantly different— and frequently conflicting— meanings to different actors" (2018, p. 585). To address this, she articulates a three-fold typology to make sense of energy democracy demands. First, consumer choice, which asserts energy governance regimes should be redesigned to give consumers more choices in their energy purchasing decisions, including more control over their level of energy demand and the opportunity to generate, store, and sell their own electricity. Second, local control, which should involve local communities claiming ownership of energy resources and control over energy decision-making. Third, access to process, in which energy regulators ought to embrace procedural reforms that enable more citizens to participate in governmental decision-making processes about energy policy across all levels of government. These three demands can at times complement, and at other times contradict, each other. The three case studies examined below will exhibit different

demands at different stages. The discussion will utilize this typology to make sense of the cases and their driving motivations.

This thesis supports and utilizes both Szulecki and Welton's branches while arguing for a centering of constituent contestation within energy democracy. Contestation transcends the means and ends discussion within energy democracy theory. It is both the campaign strategy for the process and the resting state of the normative conception. What gets lost in the above debates is what ties these different kinds of energy democracy together – constituent contestation. If the underlying goal of energy democracy is deeper community influence in the production and procurement of electricity, it is the public contestation, the rejection of the Regulatory Compact, and the depoliticization of electricity provision that unites these disparate strands of energy democracy.

Too often, energy democracy literature focuses on a particular policy change as a way to "achieve" energy democracy. For example, Ajaz (2019, p. 30) focuses on microgrid expansion and writes "decentralized energy systems such as micro-grids can be considered as a technological solution to achieve this goal [energy choice]." She then writes in her findings that, "even though the literature cites microgrids as a way to achieve energy democracy," microgrid adoption was not influenced by energy democracy (2019, p. 31). This is the wrong approach. Energy democracy by virtue of a technological solution or an energy choice law does not incorporate the idea of contestation. As the case of Kit Carson Electric Cooperative will demonstrate, the achievement of a change that neatly fits within energy democracy's calls for local control and renewable sourcing does not automatically denote an involved public or widespread contestation. Indeed, to say that a policy change in and of itself, or worse yet a technological solution, could constitute energy democracy reveals a misguided view of the

concept. Centering contestation in energy democracy—both in the process and outcome versions—works against that reductionist tendency.

This is not to say that a focus on a particular policy adoption or change undermines a scholar's claim to energy democracy. Hess and Lee (2020) address community solar and choice aggregation policies, but they are careful in relating energy democracy with the campaigns and contestation around such issues, rather than, say, calling a governor's adoption of a community solar initiative automatically or inherently energy democracy. This ensures the concept remains the territory of people rather than technical changes. It also ensures that energy democracy takes a long view; not an announcement of a policy but the systematic opening of the sector to contestation.

This thesis will therefore use Baker's definitional scope of energy democracy to refer to communities advocating for and/or receiving (i.e. both process and outcome) a "role in determining the types of energy distributed to them…as well as the types of entities that distribute it" (2016, p. 380). In other words, energy democracy focuses on both the structures of governance and on the decisions made by those governance structures. In this way, it constructively ties what is necessarily a technical and political subject. As Burke and Stephens write, "energy democracy targets energy systems as key sites of political-economic contests, shifting power over diverse aspects of these sectors, including generation, distribution, finance, technology and knowledge" (2018, p. 79).

Constituent contestation, broadly construed for this thesis, will account both for individual constituent contestation models, i.e. the individual resident engaging with other residents in collective contestation around electricity and energy, as well as ecosystem contestation, i.e. one entity pursuing contestation in their role as a constituent to a larger entity.

In relation to this thesis, in all three cases individual and collective resident action will be addressed. In the cases in which a distribution cooperative counted itself a constituent of a generation and transmission cooperative, ecosystem contestation will arise. Together, the three cases show that both competing and complementary demands of energy democracy are bridged by contestation, and in doing so, that contestation belongs in both the process and resting state definitions of energy democracy.

In addition to calling for an energy democracy centered on contestation, this paper answers a few calls from the literature. First, as the theoretical frameworks have been built for energy democracy, the theory articles inevitably solicit case studies. This thesis works to answer those solicitations. The second call that this paper aims to answer comes from Naumann and Rudolf (Naumann & Rudolf 2017). They note that energy democracy cases have largely come from urban metropolises and solicit rural cases. Here are two. This paper also answers an unsolicited call. Energy democracy is a worldwide literature which brings with it the challenge of accounting for widely disparate energy systems and practices between countries. In the U.S. specifically, however, energy democracy consistently mentions rural electric cooperatives and municipal utilities as possible providers and mediums for energy democracy, but little work has been done intimately with these structures (Johnson & Lewis 2017). This thesis hopes to do so.

## IV. Methodology

This study draws on semi-structured interviews with key stakeholders supplemented with content analysis of grey source materials. A total of 21 formal semi-structured interviews were conducted between June 2019 and January 2020. Eleven of those interviews were Pueblo-focused, five were La Plata-focused, and five were Kit Carson-focused. Albeit with a few exceptions, interviews for the Pueblo case took place during the summer of 2019, while interviews for the La Plata and Kit Carson cases took place between October 2019 and January 2020. For the Pueblo case, interviewees included citizen advocates, city and state officials, and the incumbent utility. For both the La Plata and Kit Carson cases, interviewees included community leaders and advocates as well as cooperative leadership. Interviews varied in length, but most fell between 30 and 60 minutes. All interviews were recorded and transcribed, then evaluated for key themes.

In addition to interviews, this thesis used extensive gray literatures, namely newspaper archives but also government and cooperative documents. Their usage contributes a few important factors. Newspaper articles serve as reliable checks on narrative construction. Obviously, newspapers bring their own reporting approaches, but it is difficult to fall prey to selective memory when using newspaper archives. Newspapers, and to some degree government and cooperative documents, were also used to corroborate information presented by interviewees and to fill gaps between interview information.

Case selection depended on both status of the electric contestation and access to information. Pueblo was chosen for an obvious reason: an active group of citizens were mobilizing around energy and municipalization issues, and, nationally, serious municipalization efforts are few and far between. But Pueblo was also chosen because it represents a mid-sized

city struggling with legacies of fossil-fuel-powered manufacturing and episodic economic development (Furtado, 2019). The state of Colorado is also home to another hot-spot for municipalization and other environmental research: Boulder. This study is intentional in its limited use of Boulder's quest for municipalization, in large part because of the disproportionate attention it receives and the questionable replicability of its initiatives due to its privileged dynamic of a robust tax base and an uber-progressive polity (for Boulder attention, see for example: Crandall et al. 2014; Homsy 2018; Clark & Conroy 2020). Pueblo, like most municipalities, enjoys neither.

Both KCEC and LPEA were chosen as two agitating energy entities. Kit Carson's separation from Tri-State shook the cooperative world in 2016; a thesis on recent contestation in rural electric cooperatives in the Rocky Mountain West would be remiss not to include Kit Carson. Their more recent developments continue to receive attention in the form of policy and economic briefs and a host of long-form journalism (for example, Cates & Feaster 2019; Nussey 2018). However, there has yet to be reference to Kit Carson's story in academic literature save for a quick mention in a survey of entities that have committed to 100% renewable energy (Hess & Gentry 2019). LPEA is one of three other coops actively involved in Tri-State contestation. Of these three coops, LPEA was chosen both because it was not in the midst of settlement negotiation and therefore unable to interview (like Delta Montrose Electric Association) and because LPEA demonstrates a decades-long contestation narrative, and contestation, of course, drives the action in this thesis.

## V. Case Studies

### *Pueblo's Campaign for Municipalization*

Pueblo, Colorado enjoyed healthy growth from the late 19th century through the first half of the 20th century, driven by an enormous steel plant that supplied steel for railroad expansion in the western U.S. Between 1890 and the 1960s, it was the second-largest city in Colorado behind Denver, but has since dropped to 8th most populous (U.S. Census Bureau n.d.). Numerous causes, chief among them the drawdown of steel production at the Pueblo plant, contributed to Pueblo's relative stagnation in recent decades. It has not benefitted from the widespread attention that has led to significant economic growth for its northern counterparts on the Colorado Front Range. More than 24% of Puebloans are under the federal poverty line, almost twice the national average. Pueblo's median household income, $36,280, is more than $20,000 below the national median and almost $30,000 below Colorado's median (U.S. Census 2018a).

It was in this context that Pueblo's incumbent investor-owned electric utility, Black Hills Energy, arrived in 2008 via their acquisition of the previous IOU. Issues arose almost immediately when another IOU operating in Colorado, Xcel Energy, decided to cease selling wholesale power to Black Hills Energy from Xcel-owned coal-fired power plants located just outside Pueblo. At the time, Xcel was providing 75% of Pueblo's power (Amos 2008). Black Hills, with approval from the Colorado PUC, then spent almost $500 million to construct a new natural gas generation station (Darrow 2010). There were also lower but nonetheless significant costs associated with upgrades to transmission lines, the closure of a coal-fired power plant, and maintenance backlogs that Black Hills asserts were ignored by the previous IOU.

Together, these expenses translated into sizable rate hikes. Black Hills received approval for a 10.5% rate hike in 2010, which was followed by three more increases between 2012 and 2017 (Jaffe 2018). These hikes, unsurprisingly, hit low-income residents hardest because a higher proportion of their income is dedicated to utility expenses. Between 2008 and 2016, "Black Hills' rate base had increased 376 percent which translates to a 58 percent average overall bill increase for consumers" (Worthington 2016).

The local impacts were severe. In July 2010, Catholic Charities of Pueblo received just over 530 appeals for financial assistance. In July 2011, the number had more than tripled to over 1,700 appeals (Roper 2011d). In September 2011, a staff economist at the Colorado Public Utilities Commission found that Black Hills Energy customers were paying 40 percent more than customers of the other IOU in Colorado, Xcel Energy (Roper 2011f). As a more macro indicator, the local nonprofit El Centro de los Pobres spent $125,000 on electricity bill assistance over eight years under the previous IOU. In the first nine years under Black Hills, the organization spent $500,000 (Jaffe 2018). A state official from the area noted that their office kept a drawer filled with electricity bills that their constituents had sent in demonstration of the rate increases (Pers. Comm. 9 July 2019). Stories chronicling the hardship of Pueblo's low-income community in the face of rate increases began accumulating (Roper 2011b; Savka 2017).

About a year after the first rate hike in 2009, Black Hills Energy provoked another group of customers. The utility suspended its solar power rebate, which simultaneously aggravated customers who had installed residential solar and companies in the burgeoning local solar market (Roper 2010). This was followed by a rate hike request of 19-22 percent, which was eventually pared to 4.9 percent beginning in 2012. Needless to say, the community was not content, and agitations began to surface.

The first serious efforts to draw political attention and contestation to the rate hikes came from housing and homeless agencies and advocates. Notably, they immediately saw local politicization and contestation as a way forward. One advocate noted, "we really started this movement… this effort to make sure that the city council, the county commissioners knew what was going on on the ground" (Pers. Comm., 18 July 2019). Advocates recognized that these bodies had limited jurisdiction on electric rates—the Regulatory Compact dictates those are the purview of the public utilities commission. Nevertheless, advocates considered local political awareness as an asset. In a July 2011 meeting, city councilors heard an earful from those organizations about utility reconnection policies and the lack of local customer service—disconnected customers wound up talking to Black Hill operators in Nebraska or South Dakota (Roper 2011a; Roper 2011c). Later that summer, the Colorado Public Utilities Commission held a hearing in Pueblo during which, in the words of the local newspaper, "residents gave sometimes blistering, sometimes sarcastic testimony— all of it adamantly opposed to Black Hills Energy's request for a 19-percent rate hike next year" (Roper 2011e).

Meanwhile, other contestation efforts gained momentum, including those pursued by local governing bodies. Pueblo County, whose jurisdiction includes the city as well as surrounding areas, assumed a rare advocacy posture at the PUC. As a county employee noted,

> we decided it was time to speak up and to advocate for our community in front of the public utilities commission, which is fairly rare for an economic development agency or office to do. But it was imperative that we guard against future rate increases that were inevitable with an investor-owned utility (Pers. Comm. 16 July 2019).

The County's willingness to stake such a position indicates the importance of the advocates' initial politicization efforts at the local level, including before county commissioners. Agitation at the PUC appealed to other advocates as well. Multiple Pueblo residents received appointments

to serve on the Utility Consumers' Board, which ostensibly represents consumers before the PUC.

Over the next few years, a loose coalition brought together low-income advocates focused on high rates and shut-off policies, climate advocates focused on renewable energies, and economic development advocates focused on retaining and attracting employment centers. The coalition did not immediately focus on a municipalization effort. Instead, they pursued what they called "a better Black Hills"—reforms and policy changes from the incumbent utility. Thus, in addition to political contestation directed towards government and regulatory bodies, the coalition also went straight to the incumbent utility with requests.

In their initial petition, organizers focused on three items: reconnection fees, a hot weather rule, and a forgiveness policy. Under the policies at the time, in order for a customer who had been shut-off to be reconnected, they would have to pay their outstanding balance, a $50 reconnection fee, and a three-month deposit calculated by the average of their three previous monthly bills (Jaffe 2018). As such, a customer might need to pay three or four times what they owe in outstanding bills to be reconnected, a substantial sum for low-income residents. Another demand centered on what came to be called the "hot weather rule." The utility had a cold weather rule which prohibited disconnections if the temperatures dipped below a certain value; a similar rule for unusually hot days was requested. Finally, the group wanted to see progress on a forgiveness policy for past-due accounts for low-income customers in which the utility would match contributions to pay down past-due bills.

As one interviewee who had led the three-prong campaign stated, "we kept asking those three things, and we kept getting drug out… So after about 18 months of going back and forth, we had at least 3 face to face meetings… we didn't get anything that we thought was the low

hanging fruit" (Pers. Comm. 25 June 2019). Even as a 2014 rate hike focused on different classes than before (rate hikes can be implemented to affect residential class customers differently than commercial class customers differently than industrial class customers), it did not change the pattern. In reference to this dynamic, an interviewee noted "residential rates went down, but you know, industrial went up, right? So it's whack a mole. And it was just like how many times do we have to say the same thing?" (Pers. Comm. 18 July 2019). There was an understanding that higher rates was a paradigm, not a particularity.

Then, in 2016, the PUC came again to Pueblo for a meeting, and the community turned out (Roper 2016). A homeless and housing organization leader described, "the PUC came to Pueblo and we had about 600 folks at the convention center. And they heard business people and people crying and the whole nine yards" (Pers. Comm. 18 July 2019). Just as the writer in the early 20th century found service and utility commissions to insulate utilities from the mosquito bites of democracy, interviewees saw the relationship between the commission and IOUs as "symbiotic," noting "the PUC has done Pueblo no favors" (Pers. Comm. 10 July 2019). Other interviewees saw a broken procedure for a different reason: ratepayers were paying the lawyers for both sides of the argument. "There's the irony, we pay both sides of the argument at the PUC…we pay both sides of the argument because they [the incumbent utility] are only up there because of the revenues that they earn here" (Pers. Comm. 11 July 2019). Some others, including the hometown newspaper, noted that before a Puebloan was appointed to the PUC in 2016, there had not been an appointee from the area since 1927 (Roper 2015).

While interviewees sought procedural inclusion in Pueblo, they simultaneously recognized that the procedures were well outside of Pueblo, both because the PUC was in Denver, and even more so because Black Hills leadership was based in South Dakota. One

interviewee who had attended the early meetings assessed the Pueblo leadership of the incumbent utility as such: “they have no actual decision-making... I mean, they're not at the top of the ladder. So their whole goal is just kind of amelioration here” (Pers. Comm. 18 July 2019). From simply a physical proximity perspective, local contestation was an immediate challenge.

The group that ultimately called itself Pueblo’s Energy Future eventually—some more quickly than others—came to the position that “a better Black Hills is never going to happen.” It was at this point that municipalization entered the conversation. The group coalesced around a three-legged stool. One leg proposed energy justice and energy poverty issues, concentrating on rates, shut-off policies, and other economic factors that disproportionately affect low-income residents. Another leg represented the push for local renewable energy. Finally, the third leg included economic development officials and business people who saw rising rates and an uncompromising utility as bad for both incumbent business and the prospect of attracting further economic development.

There was widespread recognition that the energy justice issue was the first on the scene and would always lead. Notably, one of the voices of this sentiment came from a member of the local Sierra Club chapter:

> Pueblo’s Energy Future established this organization around a three-legged stool: energy justice, business competitiveness, and energy efficiency/renewable energy. Energy justice has always led the way--people whose power gets cut off and the kids can’t study for school and everything in the refrigerator rots and you can’t live there so they show up at the doorstep of the homeless agency (Pers. Comm. 25 July 2019).

This not only meant that the initial call for change came from a perspective of energy justice, but also that the diagnostic metrics were centered in the justice framework: number of households

shut off, number of bills submitted to nonprofits for payment assistance, dollar amounts of funding from those nonprofits towards bill payment, etc.

The decision by movement leaders to pursue a public power entity dramatically shifted the focus of advocacy. Under the "better Black Hills" mantra, there was undoubtedly a call for increased contestation around electric regulation, but no call for structural change—the requests centered on relatively minor policies and practices within the investor-owned utility model. Likewise, intervention at the state PUC operated within the confines of a Regulatory Compact whose very ethos was technocratic energy governance. Municipalization, on the other hand, was a larger demand by orders of magnitude.

Amidst this pursuit of municipalization, the environmental leg of the coalition picked up the strategy of political contestation and pushed a 100% renewables commitment through the Pueblo City Council as part of the Sierra Club's Ready for 100 campaign. One organizer of the Ready for 100 work who also was active in the broader coalition recalled, "it was a little surreal because they [the city council] did not know what they were doing. But we did the campaign by the book—we packed the council chambers every time we had a gig with them. So we did board sessions and slide shows and the whole thing…they had no idea how much national visibility that would bring this community" (Pers. Comm. 25 June 2019). Sure enough, in 2017 the council passed a resolution committing Pueblo to 100% renewable energy by 2035 (Hillstrom 2017).

The Ready for 100 group then passed the political contestation baton to the broader coalition advocating for municipalization. While under the "better Black Hills" campaign the Pueblo City Council was, at best, simply a site for airing grievances to bring awareness, under a municipalization campaign city council became ground zero. This meant that a city council viewed as "a vacuum, a black hole" when the focus was on Black Hills would become perhaps

the most powerful decision-maker in this process (Pers. Comm. 25 June 2019). The dire reviews of council were rampant. One interviewee said that before 2017, "we have elected officials who are just not knowledgeable about any of this stuff and have not wanted to tackle it and who have often been naive about social and political movements because there are not a lot of them in Pueblo" (Pers. Comm. 25 June 2019). The interviewee concluded that the city council has varied between "ignorant and reluctant."

In some ways, however, these dire reviews have allowed for an opening to the movement. The Ready for 100 effort viewed council's lack of wherewithal on the issue as a prime reason to bring contestation, and the municipalization campaign took their cue. The strategies of contestation from Ready for 100 translated easily. As the same interviewee as above said, "we did it in the same way; we brought together the same people, we did work sessions with [council] to teach them and say, hey look, now we're not talking about renewable energy we're talking about money. And we won the day again" (Pers. Comm. 25 June 2019).

The advocacy work received a boost by a foolhardy Black Hills decision to charge the City more than originally promised for conversion to LED city streetlights. The incumbent utility announced that it wanted to more than double the annual cost of the street lights—a $1 million increase (Roper 2017a). One local newspaper reported wrote that "Council took the news like someone had just stolen their cars" (Roper 2017a). The Council President called it a "slap in the face" (Roper 2017a). Shortly thereafter, the council passed a resolution endorsing exploration of the so-called off-ramp of the franchise contract (Roper 2017b). Reflecting back with the benefit of hindsight, one city official characterized the LED debacle as "what tipped the iceberg" (Pers. Comm. 18 July 2019). The municipalization debate had begun.

In November 2017, the council created an Electric Utilities Commission, and both Council and community members were appointed in December (Pueblo City Council 2017). From the first meeting, the Commission recognized a need for outside expertise, and by July 2018 had settled on both feasibility engineering consultants as well as a contractor for public relations work (Electric Utility Commission 2018). The first phase of the feasibility report, released in January 2019, projected 10-12 percent savings for the study period of 2020-2039 with the creation of a municipal utility (Roper 2019). A second feasibility report found similar savings between 10-14% (EES Consulting 2019).

Through the feasibility process, the public remained attentive. The Pueblo Chieftain reported that "it was standing room only at the Pueblo City Council meeting Monday night, where the council was set to vote on moving forward on the second phase of an electric municipalization feasibility study" (Severance 2019). Following the second feasibility study, the coalition, which by then had transitioned to the name Bring Power Home 2020, began collecting signatures to place a measure on the ballot. This ultimately was not necessary, because in February the city council voted to indefinitely table an offer from Black Hills to stabilize rates and instead approved a ballot question for a special election May 5, 2020 (Beedie 2020). However, the signature collection demonstrates an unwillingness to proceed at the whim of city council and a willingness to take contestation into the community.

The decision to put a measure on the ballot marked a significant milestone in a process for contestation and politicization of electricity that began years earlier with the formation of a coalition of homeless and low-income advocates, church leaders, environmentalists, and others who, in the midst of hefty electric rate increases, coalesced around a call for change. The effort initially focused on reforms and responsiveness of the incumbent investor-owned utility, but

after seeing limited success, eventually shifted to an appeal for municipalization. The grass-roots campaign that arose in Pueblo offers insights on the manners in which energy transitions can be cast as equally, or perhaps even primarily, social and political changes. It additionally provides perspectives on the newfound contestation and politicization barreling towards the electricity sector, which has long enjoyed a depoliticized sphere.

But for Pueblo, it was not only the electricity sector but a larger city-wide struggle around sluggish politics and disempowerment. Indeed, the campaign challenged a long-standing narrative of disempowerment in Pueblo. The narrative of a dispirited city was pervasive in interviews. One city official said,

> "Puebloans, people who are born and raised in Pueblo, have the worst opinions of Pueblo. You get people that moved here in the last four or five years, they think they died and gone to heaven. But, you know, Puebloans just sort of bad mouth the city, they've got this low self -image…that really gets in our way of moving things forward" (Pers. Comm. 31 July 2019).

A community member expressed similar sentiments:

> "there is kind of an attitude in Pueblo that you can't fight City Hall or you can't fight big corporations. There is kind of this low self-esteem of the people who I think have been beaten down by ineffective government and then corporations that will take advantage of people if they can" (Pers. Comm. 25 June 2019).

This general sense of disempowerment easily coexisted with noninvolvement and a lack of understanding about electricity. Of course, Pueblo is not alone in this regard; it is the ultimate result of a Regulatory Compact that actively disincentivizes contestation. But what does render Pueblo somewhat unique was the eventual response to hefty utility rate hikes. One interviewee noted, "it is interesting to have a community who really didn't think much about electricity, you turn the lights on, and they come on, to becoming really the epicenter of all discussions around

energy in the country in myriad ways, practically overnight. That's a pretty big deal. Pueblo should be very proud of that" (Pers. Comm. 16 July 2019).

Indeed, the same interviewees that talk of a disempowered community simultaneously speak to the impact of a municipalization campaign. Among the samples of this type of response included one interviewee who said, "successfully accomplishing something this big, I think would add to Pueblo's self-esteem. And it would contribute to moving the community forward" (Pers. Comm. 31 July 2019). Another who worked on the early Black Hills efforts said, "if this could happen, I think it could be a springboard to other efforts to realize we do have power" (Pers. Comm. 25 June 2019).

Pueblo's story continues—a special election is scheduled for May 2020 in which residents will have the choice between breaking the contract and pursuing municipalization or remaining a franchise of Black Hills. This case therefore does not offer insights on the results of municipalization but instead looks to the political and social impacts of a campaign *for* municipalization. In other words, it demonstrates the impacts of contestation in the electricity sector and how contestation has not only changed electricity conversations in Pueblo but also spread to burgeoning community empowerment.

*Kit Carson Electric Cooperative's Challenge to the G&T*

Kit Carson Electric Cooperative (KCEC) serves north central New Mexico, with its headquarters in Taos and lines extending to Taos, Rio Arriba, and Colfax counties. With 29,000 member-owners, it is the second largest rural electric cooperative in New Mexico. As one interviewee described it, the community includes residents of pueblos, descendants of Spanish settlers, artist transplants, then the hippies, and then the yuppies. About 50% of the population is

Hispanic and about 10% is Native American (Cates & Feaster 2019). Like Pueblo, Kit Carson's service territory faces economic hardship; the median household income is $36,758 in Taos County and $33,783 in Colfax County (U.S. Census Bureau 2018b; U.S. Census Bureau 2018c).

KCEC became part of Tri-State Generation and Transmission by virtue of a merger of Plains Electric Generation and Transmission and Tri-State in 1999/2000. As part of the merger, KCEC signed a contract until 2040. The sticking points in contract negotiations foreshadowed future difficulties. As one interviewee put it, "that contract was one of the overarching points of contention for the next decade or more" (Pers. Comm. 6 December 2019). As part of the merger and ensuing contract, Tri-State agreed to open their books and stand before regulators in New Mexico should more than three cooperatives protest a rate hike and regulators found "just cause" in the protest. Another clause of the contract required cooperatives to purchase 95% of their power from Tri-State, limiting member cooperatives to 5% self-generation, including local renewable generation. Both rates and generation caps played major roles in driving KCEC and its member-owners to separation. A member of an environmental group said "[Luis] Reyes [the CEO of KCEC] was unhappy with that contract from the very beginning and rightfully so. He was pushed into signing this 40-year all-services contract, which didn't leave him a lot of leeway in making necessary changes as technology changed" (Pers. Comm. 6 December 2019).

Between 2001 and 2011, Tri-State increased rates seven times (Nash 2011). Those increases nearly doubled the cost of wholesale power provided by Tri-State (Logan 2014). Mr. Reyes acknowledged "that any coop… needs to have the ability to raise rates to cover your costs." But, he added, "we just can't sustain rates getting raised on average every 14 to 18 months." For many years, KCEC was the lone coop in New Mexico to formally protest the rate increases (Logan 2012b). However, as the hikes continued, two other cooperatives joined Kit

Carson in protest, triggering the three coop review by regulators. The rate hike informally announced in late 2012 "mark[ed] the ninth time Tri-State has asked for a rate hike since 2005" (Logan 2012b). In response to the three-cooperative threat, Tri-State countered that, despite the contract clause, they were solely involved in interstate commerce and thus should avoid state regulators. KCEC responded that such a counter meant that Tri-State bargained in "bad faith" during the merger process (Logan 2012c). These rate protests mark what would become a pattern for KCEC: they would be alone in protest for some years before others saw the value or necessity of contestation.

Meanwhile, KCEC continued to pursue renewable energies, flirting with the 5% self-generation cap. This pursuit largely reflected community momentum. One interviewee recalled "the public continued to express to Kit Carson, going back to the early 2000s, they would like to be operating on renewable energy" (Pers. Comm. 2 December 2019) The 5% cap, however, loomed on the horizon. As Taos News wrote in 2012, "in the last five years, Kit Carson Electric Cooperative has taken an aggressive approach to incorporating solar power into its grid — so aggressive that it has essentially maxed out the renewable energy it can produce" (Logan 2012a). KCEC's implementation approach was paired with lobbying Tri-State, but to no avail. As Reyes tells it, they kept hearing from members about the desire for more renewables, but at Tri-State, "from 2006 to 2014 there was no success in moving that needle." Not only did the needle not shift, but from Kit Carson's perspective, Tri-State actively undermined the renewable energy future that Kit Carson envisioned. One community member noted that at the time, "Tri-State was not only heavily invested in coal-fired power, they were looking into even further investment [in

coal] out into the future.[1] That was their method… And there wasn't much that the other coops could do except to offer kind of token resistance" (Pers. Comm. 6 December 2019).

External pressure likewise failed to see progress. Renewable Taos, a local nonprofit, took a resolution on renewable energy "to every local government in the area, attended their meetings, and pushed for them to read and sign the resolution. From the beginning of 2013 well into 2014, we got 10 local government signatories on the resolution. And all of the resolution votes were unanimous" (Pers. Comm. 6 December 2019). Moreover, three members of the New Mexico congressional delegation—the local U.S. representative and both U.S. senators— piled on, urging Tri-State to relax the cap (Logan 2013b). But the pressure fell on deaf ears. So, despite KCEC earning an award of Utility of the Year in 2013 by the Solar Electric Power Association, they found their future solar ambitions constrained by the generation cap (Logan 2013a).

Although the external pressure was initially unsuccessful, it demonstrates the degree to which community organizations and advocates were aligned and even allied with the incumbent provider, KCEC. As a leader of one nonprofit noted, "it turned out to be a collaborative effort… we made the conscious decision that it would be best for us to work in collaboration with Kit Carson, rather than to work independently" (Pers. Comm. 6 December 2019) This distinguishes Kit Carson from the two other cases where, at least initially, contestation posture was more antagonistic than collaborative.

While rates and generation cap issues dominated the conflict, Tri-State board governance also arose as a point of contention. Tri-State's board draws its composition from one representative from each member cooperative (44 before KCEC's exit). The crux of the problem was,

[1] Tri-State had an active share in the Holcomb, KS coal-fired generation plant project from 2005 until its cancellation in January 2020 (Ogle, 2020).

> for Tri-State, that means if you're a board member of your local coop and you are sent to the Tri-State board [as the coop's representative], Tri-State believes that your Tri-State board membership is primary, and that you are there to serve Tri-State and the best interests of Tri-State, not the best interests of your coop (Pers. Comm. 12 December 2019).

Another interviewee noted this dynamic "maintains the status quo because what you see is this mentality of it isn't broke, don't fix it, when in fact, being in energy or telecom or any of these utilities, we're always subject to change" (Pers. Comm. 2 December 2019). This insistence on a fiduciary duty to Tri-State in turn made it difficult for a minority concern to receive the light of day. As Mr. Reyes said, "I don't think the conventional board governance we had with Tri-State at that time really allowed minority members really a solution or even a partial solution. It was almost take it or leave it. If you have 23 votes, you get what you want." For a cooperative like KCEC who constantly pushed and contested Tri-State decisions, the inability to 1) have the coop's representative to Tri-State speak for KCEC's interests and 2) receive any form of compromise or relaxation of Board decisions over multiple years of protest rendered KCEC willing to sever ties.

After years of agitating, it became clear, in the words of a renewable energy advocate, that,

> Tri-State was getting in the way of Kit Carson doing what was good for its membership… Somewhere in 2013 or 2014 we started to see that there has to be a way and we were really seriously looking at various methods to kind of get around it (Pers. Comm. 18 December 2019).

From the coop's perspective, Tri-State was indeed getting in the way. The community continued to express support for local renewables. The coop formed a 15-person committee of members to gauge the territory, and the committee's report favored expansion of local renewables. Mr. Reyes said the cooperative noticed "larger members like the Town of Taos, the school districts started to put solar behind the meter [solar behind the meter does not count as part of 5% self-generation

because it is technically not cooperative-generated solar]. At that point, that's a message that if you guys don't do something, we certainly will."

The ideologies driving the push for separation mirror those of Pueblo in many ways. Local renewables contribute both to the financial and environmental sustainability of the service territory. One community advocate said, "our motto is local energy and a strong economy" (Pers. Comm. 18 December 2019) A favorite line of community members was how 70% of the cooperative's revenues flow to Tri-State for energy expenditures while Tri-State does not operate major generation stations in the KCEC territory. Local generation took on additional importance for some interviewees in the context of how they viewed their region. One noted,

> New Mexico is an oil and gas colony. We're colonized. These people come in here, they drill, they take our resources, they gave us a couple of pennies. And then the rest of the money goes to Houston or Dallas or Miami or North Dakota. Going forward, we don't want to be a renewable energy colony. We want to own it. We want to have a piece of the action here, to keep the money here in New Mexico" (Pers. Comm. 18 December 2019).

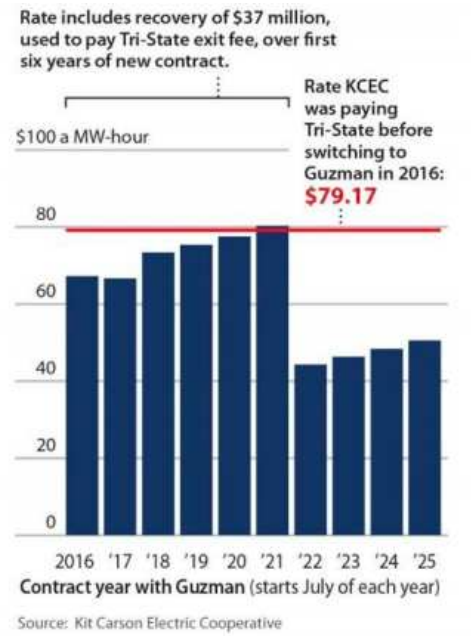
At this juncture, Kit Carson's case veers from that of Pueblo, LPEA (see below), or others simply because every path forward did not have a clear precedent. There was not a clear process for separation and Tri-State initially set an exit fee of a whopping $137 million (Logan 2015). KCEC called the proposed exit fee "insulting." No coop in the Tri-State membership had attempted a solo buyout, at least since Tri-State implemented 40-year contracts in the early 2000s. Therefore, in contrast to the current dynamic in LPEA, where, as will be seen, citizen advocates point to KCEC both as a potential path and as leverage to pressure Tri-State, KCEC had little way of knowing what was considered possible. Furthermore, all of the other agitating coops did not pursue a separation as aggressively as KCEC at that time. Mr. Reyes noted that "we talked to other coops who had the same type of concerns… when it finally came to doing it we were the only ones that pulled the trigger."

Within this dynamic, Mr. Reyes became the agent of change and took on an almost mythical role in many interviewees' reflections. For example:

> I think it was only one man [Luis Reyes]. I call him a chess player… He opposed Plains Electric-Tri-State merger because he didn't see how it was going to serve Kit Carson. Then he worked with Tri-State and then ultimately was a board member of Tri-State and saw…their discrepancies… and when he projected that forward, he didn't see reliability and stabilizations for his community, which are primarily low-income folks. So he …beat them at their own game so that Kit Carson could leave. And then he won. Because he also went out and found the best minds and the people that could tell him what the calculations of the formula [for the buyout]" (Pers. Comm. 10 December 2019).

Another interviewee who was a member of an environmental group noted in more succinct fashion, "the end result was Luis figured out he could get us out of the Tri-State contract and get us a better deal" (Pers. Comm. 18 December 2019). That better deal ultimately involved a $37 million exit fee, rather than the $137 million originally demanded by Tri-State (Logan 2016). The structure and method of calculation for the fee remains undisclosed, and in Tri-State's most recent separation settlement with Delta Montrose Electric Association (another former member-coop on Colorado's Western Slope), the fee amount as well as calculation method remains sealed (Grand Junction Sentinel, 2019). The fee was paid for by Guzman Energy, who immediately thereafter entered into a 10-year contract with KCEC in which Guzman would serve as the energy wholesale trader and provider for KCEC. The 2016 KCEC annual report read, "now our members have a 10-year short-term fixed-cost of power purchase contract, and a plan to develop 35 megawatts of solar power by 2022, which will allow KCEC to generate 100% of its year-round daytime power supply from the sun" (KCEC 2016). As the graph below indicates,[2] the

[2] Although the information in the graph is attributed to Kit Carson Electric Cooperative, the graph itself is courtesy of Cates and Feaster (2019).




contract guaranteed wholesale rates of electricity that, for the five years of the contract, only slightly undercut Tri-State's wholesale rates in 2016 in order to pay back Guzman's front of $37 million. However, come 2022, rates will fall significantly. Following the separation, KCEC immediately began rolling out small-scale solar arrays, with aspirations for up to 35MW (Matlock 2017). KCEC had an initial goal of full daytime solar by 2022, a goal they now expect to reach in 2021 (Best 2019). In late 2019 KCEC had reached a portfolio of almost 50% solar (Best 2019).

Notably, Kit Carson's perspective on renewables is informed by economic and equity concerns. Renewables have long troubled folks concerned about equity because of the upfront costs involved in individual setups. As Reyes put it,

> what we built, I would say is probably the purest form of community solar, at least in the Rockies. Because I have, let's say, a dozen, thirteen, fourteen solar assets that are delivering energy today at the same price to those who have money to those who don't. [Used to be, you] put solar on your roof top. It was the people who had the tax liability, take the income tax credits, had the upfront cash or credit to finance that…And so what happened is the school teacher, the police officer, the nurse that wanted renewable energy and couldn't afford it, they're left out. Then you got the second permeation, we'll build 100 kw, then you subscribe. And again…only those who can afford to subscribe to it, they have probably a different or higher rate than those who don't subscribe to it. Ours is truly if you live in [the territory of a solar array], all the energy today is solar. Everyone's paying the same rate-- the wealthiest person in town and the poorest person (Pers. Comm. 2 December 2019).

Under a model like Kit Carson's, renewable is not a self-selection for those who can afford it but rather the default gird.

The results of the separation have dominated national conversations on rural electric cooperatives, locally generated electricity, and resiliency. Kit Carson was named as one of nine participants in the National Renewable Energy Laboratory's Solar Energy Innovation Network and in 2019 was a Smart Electric Power Alliance Power Play finalist (National Renewable Energy Laboratory n.d.; Smart Electric Power Alliance 2019). But these conversations around the implementation of strong renewable energy policies need to be rooted in the process by which Kit Carson achieved them— contestation and Kit Carson's bold approach politicization of energy. Most institutional actors or energy providers work to avoid unnecessary politics, preferring to keep conflicts hidden or simply not engaging in conflictual behavior to begin. Kit Carson, in contrast, led a new paradigm for rural electric cooperatives. One community member said,

> I don't know how you could say anything else but Kit Carson has led on this [contestation in front of Tri-State]. There were 44 and there are soon to be 42. Kit Carson has caused a sea change…Kit Carson definitely started this thing. If we are all right two years from now, and Tri-State is teetering or bankrupt, it is going to be Kit Carson and Luis Reyes who really made that happen. It's pretty crazy and heady that little Taos started that. Certainly we've changed the calculations and discussions (Pers. Comm. 18 December 2019).

But the impact—the "sea change"—that Kit Carson's contestation catalyzed in the rural electric industry did not always bring the same rosy predictions for local political empowerment.

The narratives centering on contestation's effect on community empowerment are complicated and at times competing. On one hand, stories like that of Northern New Mexico College affirm the empowering possibilities. NNMC hoped to reopen its shuttered El Rito campus, and "everyone said the same thing [about why the campus closed]: the cost of utilities was too expensive" (Pers. Comm. 7 January 2020). Because of KCEC's separation and ensuing freedom for self-generated local renewables, NNMC, KCEC, and Guzman partnered to place a

1.5MW solar array on the campus as part of KCEC's distributed, small-scale solar strategy, with tangible community impacts. A NNMC administrator stated,

> As soon as the community started to see those panels go up, it would be a visible manifestation of the college's intention to revitalize that campus. And the symbolism of that, not just the fact that its construction, but its construction of something that's renewable, something that is environmentally sound, something that is fiscally sustainable…I knew that seeing that would make a difference. And it has. So, I will tell you that for the first time since I've been here, there is a real sense of optimism that the campus is coming back (Pers. Comm. 7 January 2020).

Some even attributed NNMC's ability to pass a mill-levy to fund parts of the reopening of the campus to the solar array and the narrative it set.

Despite the success story of contestation in the cooperative world and for NNMC, multiple interviewees noted that both the dramatic path to separation and the post-separation developments have brought more external attention than internal empowerment. Taos News wrote about six months before the separation was announced that "outside Taos, Kit Carson and Reyes are lauded by the cooperative industry for progressive efforts to adopt solar power and expand broadband in rural New Mexico. But in Taos, where politics is often personal and multi-generational, the co-op doesn't always enjoy those praises" (Taos News Editorial Board 2015). One interviewee affiliated with an environmental organization noted that the separation was "more well received and used as a model outside our community than it is within it" (Pers. Comm. 6 December 2019). Speaking about political empowerment, an interviewee said, "I don't think it's local. Again, I mean, by reputation, now Luis is the man that every coop in the Rocky Mountain states comes to and [the] Rocky Mountain Institute comes to, and NREL comes to, and political leaders come to" (Pers. Comm. 10 December 2019).

Unsurprisingly, different interviewees interpreted the internal/external validation differently. Some readily emphasized it as a redeeming quality—they pointed to the fact that

KCEC is a tiny drop in the bucket for worldwide electricity usage and thus the purpose lay in KCEC's proving the viability of the template. One interviewee even said that the more positive outside reception was the "intention" (Pers. Comm. 6 December 2019). Other interviewees were cautioned by the lack of local inspiration. From 2008 to 2015, KCEC did not have quorum at its annual meeting (perhaps the most ironic part is that bylaw changes cannot occur without quorum; when the first quorum in seven years occurred in 2015, a bylaw change was proposed to lower quorum from 3% to 2%) (Hooks 2015). Quorum was reached in 2015 when all attendees were given a $20 bill credit and entered into a drawing for a free truck (Hooks 2015). When asked, one interviewee responded that,

> part of it has to be because Taos is a poor county—one of the poorest in New Mexico—people work two, three or more jobs to survive and when you are doing that you don't always have the time or the will or the energy to get involved in other things, and that's a huge problem and to the detriment of all of us and democracy. Democracy can't survive that way. And I think that is also one of the limiting factors [to KCEC publics]. Obviously, we won't know until we get more equity in our community and then we will be able to ask the question of involvement. I think that [lack of equity] is one of the things holding us back in the coop model and democracy in general (Pers. Comm. 18 December 2019).

As this interviewee makes clear, even though KCEC has garnered praise, challenges remain in the work of energy democracy. Thus, perhaps the most important takeaway is even for a cooperative who by many standards "achieved" the policy aims of energy democracy, and for whom contestation remains part of their mode of operating as they assist other cooperatives in agitations, energy democracy cannot be considered "achieved" via solar percentages or grand separations.

*La Plata Electric Association Contested by Member-Owners*

Just across the state line in southern Colorado, La Plata Electric Association service territory hugs the southwestern border, serving the entirety of La Plata and Archuleta counties and portions of Hinsdale, Mineral, and San Juan counties. As an interviewee described, it's "where the mountains meet the desert." With 34,000 member-owners, LPEA is Colorado's fifth largest electric distribution cooperative. Like Kit Carson before 2016, LPEA is a member cooperative of Tri-State G&T and is contractually committed to Tri-State until 2040 under a contract that limits self-generation to 5%.

The LPEA territory has seen significant economic and population growth in the past few decades, which have changed the character of land uses and associated communities. One interviewee noted,

> We were a traditionally rural, agricultural community in the 1930s or 40s when the electric cooperative was established. But there has been a tremendous amount of transition in the last fifty years. The largest employer in Durango once upon a time was a timber mill which that site is now a medical center and condominiums, which is probably a good tangible example in the change of the economic base of our region. So there are still some agricultural-based folks in our community but there are relatively few that obtain their year-round economic livelihood from agricultural…Durango now is more of an amenity-based community and Pagosa Springs is very much that as well (Pers. Comm. 16 December 2019).

As such a shift would suggest, La Plata's service territory benefits from relative economic strength. Both La Plata and Archuleta counties have median incomes over $50,000 (U.S. Census Bureau 2018d; 2018e). But the changes in economic base have produced pressures on the demographics and ideologies of the community, and those pressures have manifested themselves in the proceedings of the electric cooperative.

The increased attention paid to, and resulting contestation about, LPEA came in the form of petitions for increased renewable energies as well as for more local control (and its corollary

of more local economic development). Environmental organizations and activists entered the fray concentrated on generation decisions. As one interviewee who runs an environmental organization said,

> it became pretty apparent that one of the most effective things we can do to address climate change locally was to change the source of electric power generation for our local electric cooperative. And the way to do that was to obtain a board of directors of the coop that was more aligned with renewable energy goals and that also aligned closely with local economic development benefits (16 December 2019).

As environmental groups became fixated on LPEA, local economic development advocates also joined the effort. As one environmental organizer recalled, "what Local First [a nonprofit local business alliance] brought to the table was hey, environment people, this is not just a climate issue. It's an economic issue. LPEA gets $100 million of revenue per year. But $70 million goes to Tri-State… And so now we have two powerful reasons for change. One is economic and the second is climate" (Pers. Comm. 10 January 2019).

Multiple interviewees point to the early 2010s when the proverbial pot was first stirred, and *Durango Herald* archives reflect similarly. One interviewee recalled that renewable energy advocates had run in board elections before, and one had succeeded in the mid-2000s. But they were haphazard, uncoordinated efforts that did little to draw increased attention or politicization to the cooperative. The interviewee continued, "after we had had a couple of failed candidates, we decided that in order to get change, we're going to have to run a panel of candidates… so [we] began this real effort, advertising and knocking on doors and talking to people about how important it was that they vote in these cooperative elections and why it was important and going to the board meetings" (Pers. Comm. 16 December 2019). A 2012 *Herald* article matches the emergence of the "slate of candidates" strategy, writing that there were "four candidates running on a platform to encourage the development of local sources of renewable energy" (Haug

2012a). The strategy was successful, with two of four challengers ousting incumbents, and enjoyed success in subsequent years as well. In 2013, three of four challengers advocating local renewables won seats, marking the first time that the Board was evenly split between the progressives or renewable-friendly camp and the more conservative base uninterested in exploring significant changes in structure (Haug 2013). After 2014 elections, the *Herald* reported that "Board members elected in recent years on an alternative energy/conservation platform now hold all four top positions on what is called the executive committee" (Rodebaugh 2014).

Beyond the immediate gains for advocates of local renewable energy, the narrative described above by the interviewee foreshadows an enduring success of more importance to this case study and thesis. The combination of candidate slates paired with get-out-the-vote efforts translated to nearly doubled voter turnout from the election the year before (Haug 2012b). Unsurprisingly, it also translated to a more robust public debate in the lead up to the election. One candidate said, "I don't think that all the incumbents would have been talking about renewables and discussing the rates if there had not been pressure from all four districts" (Haug 2012b). In elections since 2012, almost all board positions up for vote have been contested. The direct contestation underlies one of the most robust turnout rates among cooperatives in the United States. LPEA holds yearly elections (directors serve staggered terms; one of three directors from each district stands for election every year), and every year between 2012 and 2018 enjoyed over 20% turnout, topping out at 28% in 2017 (Shinn 2018; Durango Downtown 2012). As we recall from section III, over 72% of coops in the United States average voter turnout under 10%.

The enduring impacts are contagious beyond election dynamics and turnout. The number of letters to the editor in the *Herald* addressing LPEA board decisions steadily increased over a

multi-year period. The contestation and pressure also spilled into cooperative and board procedures. One community member who coordinated contestation efforts recalled that,

> Certainly they [Board of LPEA] had not had people coming to their meetings and making comments every single week before, so there was pressure there because now they had an audience. And they had people making comments…So really making the Board of Directors accountable at the same time as trying to change our board of directors from being the good old boys' network. Several of those people, one of them still, has been on the board for almost 30 years…
> So we did both [internal and external] pressure. We changed the look of the board of directors, made them accountable by going to the meetings. And finally we got audio and video actually of the meetings. So they're a lot more transparent than they were before. And that in itself, I think creates pressure because it makes people accountable to their decisions (Pers. Comm. 16 December 2019).

In other words, the effects of attention and contestation were not siloed to elections, but rather extended throughout the year in weekly and monthly manifestations at board meetings and comment periods. As another interviewee put it, "there started to be this realization that people are paying attention, starting to be real fights for power again" (Pers. Comm. 16 December 2019).

Contested elections soon crafted a board willing to address difficult and politicized issues. As early as 2013, LPEA's contract with Tri-State Generation and Transmission, specifically the 5% cap on self-generation, became a focus of board discussion (Rodebaugh 2013). The politicizing forces that led to changes in board composition and procedure above—desire for increased renewables and local control/local energy economies— found their common purpose in the Tri-State discussions. The cap meant LPEA's generation portfolio was almost entirely controlled by Tri-State; the amount of LPEA renewable usage depended on the amount of Tri-State renewable generation. For local economic development proponents, the cap prohibited LPEA from developing major local energy projects. Debates about the cap also brought in a new element: resiliency. From cooperative leadership to citizen advocates, multiple

interviewees noted how a hub-and-spoke model of electricity generation and transmission renders the grid, with its hundreds of miles of transmission lines, vulnerable to wildfires, floods, and other events. Local generation limits this risk by cutting the distance from source to consumer.

The 5% cap and its associated barriers led to the next chapter of contestation. A community member noted that "there is a lot of pressure put on LPEA in terms of members of the coop going to the board meetings, pressing the LPEA board to pass resolutions to send off to Tri-State to allow for more local generation of electricity" (Pers. Comm. 16 December 2019). Like Kit Carson, residents and advocates in La Plata's service territory emphasized resolutions because they saw Tri-State's insistence of fiduciary duties as disingenuous. One interviewee waxed on this subject for minutes:

> [One LPEA representative said] I'm the representative from LPEA. But as a board member at Tri-State, I have to hold Tri-State's best interest at heart, instead of LPEA's best interest. And not only that, but what I hear in executive session there, I can't tell you. So we start thinking, Whoa, what's going on here? I mean really and truly those cooperatives who are sending representatives aren't really sending representatives to Tri-State. Because Tri-State is saying you have a fiduciary duty to us. And this is what the representatives kept coming to us and saying. So then we start to realize we really don't have any power. We have no power at Tri-State whatsoever. You're not an LPEA representative, you are a Tri-State board director and therefore you have to take off your LPEA hat and wear a Tri-State hat when you're here…I remember one instance in which an LPEA board member voted unanimously on a resolution on the LPEA board, but when it went to Tri-State, he voted against it (Pers. Comm. 16 December 2019).

So in the midst of continuing intra-LPEA contestation (election turnout remained high and board meetings continued to attract attention), the board took a cue from its constituents and spread the contestation to its work with Tri-State. As the previous case delineated, the Kit Carson separation rocked the rural cooperative world with its commitment to locally produced

renewables at lower rates, and in its wake LPEA began to agitate in front of Tri-State and statewide entities. As one interviewee who directed an environmental organization put it,

> what Kit Carson did in Taos… that was very appealing… And then seeing Tri-State seemed to be oblivious to the world of climate change and the trends where energy generation was going. Watching Tri-State still wandering along trying to build a coal fired power plant in Kansas [see footnote page 25] while Xcel is rapidly divesting themselves of coal-- it just seemed like such a disconnect between where we wanted to go and also where the energy sector was moving quickly. Tri-State seemed to be so out-of-sync with the events in the world around them, and then we had this great template of what Kit Carson was doing, and Delta Montrose to a lesser degree, so it seemed like a very prime, ripe opportunity to get involved on that front (Pers. Comm. 16 December 2019).

Indeed, LPEA has become involved. The board has sought rule changes from Tri-State, unanimously approved a goal to reduce the coop's carbon footprint by 50 percent from 2018 levels by 2030 while keeping rates lower than 70 percent of its peer cooperatives in Colorado, engaged consultants for investigations of buyout costs and savings, and has actively pursued a case in front of the state Public Utilities Commission to force Tri-State to provide a buyout number (Shinn 2018b; Shinn 2019a; Shinn 2019b; Shinn 2019c). As an interviewee concluded, "the board is feeling some pressure to do something. The petition they filed with the PUC is probably a direct result of that growing community pressure" (Pers. Comm. 10 January 2020).

Like Pueblo, the LPEA campaign is ongoing. Tri-State responded to LPEA's petition for the Colorado PUC to set an exit fee by asking the Federal Energy Regulatory Commission (FERC) to preempt the state PUC's jurisdiction because FERC regulates Tri-State's wholesale rates (Armijo 2020). FERC declined, and as of writing the case proceeds at the Colorado PUC. Meanwhile, Tri-State says that its contract committee is working on options to expand flexibility for member coops, including partial contracts that would eliminate the 5% cap and instead allow member coops to express intent for self-generation (Best 2020). Up to 300MW of system-wide

capacity would be available during a potential "open season" (Walton 2020). But both LPEA and United Power, the other primary agitating utility, remain consistent in their contestation and their reflection of constituent pressure. In response to FERC's decision, LPEA CEO Jessica Matlock emphasized the importance of pursuing an exit fee, saying "since we don't have an exit number, we can't determine the best course of action for our members" (Armijo 2020).

While interviews took place before this most recent development, interviewees reflected on the transition that they have seen at LPEA. An employee of the coop noted that there has been a "groundswell of people in the La Plata service territory that believes that we should be looking at other alternatives and have that conversation" (10 December 2019). One interviewee even said explicitly, "I would call it increased democracy… there is a tremendous effort by the board to be as transparent as they can be" (Pers. Comm. 16 December 2019). In a tribute to the level and persistency of contestation, another interviewee told the story of how "other community members were like, oh my God, look it's democracy, we can do that too! … I think that people took note that it was actually democracy working, which is pretty cool" (Pers. Comm. 9 December 2019). So, although LPEA has many more procedural steps as they seek an exit charge and then ultimately decide whether to leave Tri-State, contestation has left its mark in this southwestern Colorado rural electric cooperative.

## VI. Discussion

Just as scholars of energy democracy see social and political transitions as imperative for electricity sector changes, the movements and campaigns addressed in the cases examined here lead with governance and contractual issues, rather than technical issues. Of course, organizers recognize the technical complexity involved in electric decisions, and for Pueblo, organizers willingly note the technical (in both engineering and legal manners) knowledge required for municipalization efforts. But in each case, contestation is not centered on technical issues; instead, it focuses on governance or contractual disputes. Furthermore, to the extent that baseline technical comprehension is necessary, the contesting groups distributed educational materials in an effort to remove technical barriers which have long been used to cordon off the electricity sector from contestation.

From this common starting point of overcoming the depoliticizing tendencies of the energy sector, the cases respond to the theoretical frameworks established in section 2, including process versus outcome, consumer choice, local control, and access to process. The discussion section will first address Sovacool, then Welton, before finding contestation as the transcending element amongst the frameworks. The discussion will close by addressing the contestation's role in the future of energy democracy conceptions.

Sovacool argues that energy democracy can denote both existing/ongoing processes and a normative goal. The cases offer support to this approach; both Pueblo and La Plata remain in campaign or negotiation mode while Kit Carson achieved their desired outcome, but all three demonstrate energy democracy's key of contestation. Kit Carson has been a leader in various ways, from the separation from Tri-State to its commitment as a rural electric cooperative to 100% daytime solar by 2022. Yet it is not these policies themselves that constitute energy

democracy, but rather the contestation that brought them to these policies. Daytime solar, or any other particular policy, does not on its own qualify as a challenge to a depoliticized sector. Instead, Kit Carson represents an illustration of energy democracy because it maintains a posture keen on contestation, including offers of assistance to other cooperatives as they pursue their own contested separations.

Welton's three tenets of common demands of energy democracy—consumer choice, local control, and access to process—are reflected to varying degrees in the cases. Consumer choice arises least frequently. In Pueblo, advocates pushed for "choice" insofar as arguing that residents should be able to vote whether to continue with the incumbent utility or create a municipal utility (City Council ultimately did forward the issue to voters). But Welton does not focus on this type of choice as much as choice as seen through demand-side management policies or consumers-as-producers infrastructure. Likewise, for Kit Carson or La Plata, their consumer choice advocacy centered on eliminating the 5% cap to allow for the cooperatives to choose more of their generation mix. But again, by consumer choice Welton focuses on individual (i.e. demand-side) consumers, not the ability of a cooperative as a whole to choose a path forward. In sum, none of the cases were driven primarily by a consumer choice agenda.

If consumer choice was background music, local control was the frontstage headliner. All three cases emphasized local control and benefits. In Pueblo, local control was both a safeguard against rate increases for profit motives as well as a potential economic driver. Interviewees loved to point to a story about a local burger joint that had stores in Pueblo and a nearby city—the chain's electric rates in Pueblo were 30 percent higher (Severance 2019). The implicit argument was that not only would current operations in Pueblo be able to hire more people or

lower prices, but that new economic growth might arrive if the incumbent utility, and its soiled economic reputation, left the city.

With Kit Carson, local control was similarly seen as a way to jump off the train of continuous rate increases while keeping more cooperative revenues circulating in the local economy. For La Plata, local economic development was the primary articulation of local control. Advocates saw local generation as a way to keep money local via construction and maintenance of solar or other generation facilities, and both cooperatives were uniquely primed for local generation. As Welton notes, many lofty energy democracy goals for local generation do not materialize because even if the governance structure is decentralized, it often will still need to buy power on the wholesale (nonlocal) market. But Kit Carson and La Plata, who were/are constrained by a 5% cap, do not see more self-generation as a distant goal. As delineated in the case study, Kit Carson, in just 4 years since separation, has dramatically increased their self-generation via community solar.

Like local control, access to process manifested across the board. In Pueblo, as the case study noted, access to process arose in relation to the state Public Utilities Commission and in relation to the incumbent utility. One interviewee, comparing the PUC to a potential public power entity, noted her support "so that you aren't a supplicant at the Wizard of Oz hoping to get a hearing." Likewise, a public power option "would not only get people at the table, but you would own the table."

For Kit Carson and La Plata, access to process centered on Tri-State operations. The insistence by Tri-State that cooperative representatives sitting on the Tri-State board vote in the best interest of Tri-State, not their home cooperative, tainted the idea that individual cooperatives have access to process. Add to that the sentiments of one cooperative leader who said, "our

current relationship with Tri-State, it…is very command and control, don't ask questions, follow everyone in line and just be quiet." Pile on the fact that, just like the Rural Power Project found in the American southeast, "you walk into the boardroom, and they're 90% white males over the age of 60," and the procedural critiques begin to crystalize.

These dissections of the three cases bolster the formulation of energy democracy as a multitude of strands that comprise a broader term. Indeed, the cases conceive and articulate energy democracy in relation to their different contexts. In Pueblo, local control was chiefly a rallying cry for low-income advocates and housing agencies, while in La Plata, local control was viewed as a way to increase renewables and local economic development. Transcending those variations, however, is contestation. Each case placed pressure on the electricity sector and in doing so countered a decades-long narrative of depoliticization.

Ever since homeless and housing advocates brought high rates and cutoff issues to the city council in the early 2010s, contestation has surrounded electricity in Pueblo. Perhaps the most striking characteristic for Pueblo is the sheer number of sites of contestation. Because the Pueblo case began as solely a push for reform, initial efforts were brought to the city and county but the primary spots for contestation were the incumbent utility itself and the Public Utilities Commission. Then, with the pivot to a municipalization campaign, city council decisions became hotly contested. Furthermore, when the movement went from reform to municipalization, it simultaneously went from an issue that affected subsets of residents—low-income, renewable energy owners—to one that affected every ratepayer in the Black Hills Pueblo service territory. This in turn converted local institutions into community forums. The local newspaper featured op-ed after op-ed on the subject. Local nonprofits became sites of contention as some organizations that received corporate donations from Black Hills defended the incumbent while

other organizations shunned those donations and spoke out against the utility. In short, contestation was contagious.

Contestation for La Plata focused almost exclusively on the board and leadership of the cooperative—both its composition and its decisions. Very recently, Tri-State as well as the Colorado PUC have become the focus of contestation for this case, but for most of the past decade, the cooperative was the sole focus. Like Pueblo, activists in La Plata began with ambivalent or outright antagonistic relations with the governing body and have transitioned to generally allied relations. In this way, La Plata resembles Pueblo's citizen efforts; however, La Plata member owners are advocating for changes within a structure, while Puebloans seek a completely new structure.

In contrast to both Pueblo and La Plata, where advocacy was led by community members outside of the decision-making structures and directed ire towards those with decision-making ability, in Kit Carson, community contestation was often allied with local coop leadership. Granted, the cooperative faced protests for rate increases in front of the New Mexico Public Regulation Commission and even a threat of board recall elections serious enough to merit a local newspaper article (Logan 2011). But the actors that proposed a serious alternative vision for electricity provision worked in collaboration with Kit Carson and agitated in support of the separation with Tri-State.

In bringing these three cases into conversation, this thesis has worked to both expand and explicate the various strands within energy democracy while proposing a shared language of contestation. Energy democracy, as a young literature that has just completed its first decade in academic journals, remains theoretically flexible as theorists work to arrive at shared definitions and concepts (van Veelen & van der Horst 2018). This thesis therefore does not propose an

entirely new analytical framework but rather works to point to a transcending theme or principal that cuts across variations: contestation.

In doing so, it argues against a possible avenue for energy democracy—that which is obsessed with policy changes that increase or decrease local control or portfolios of renewable energy. Energy democracy should not align itself with an energy transition defined by reaching technical measures, renewable energy portfolio thresholds or otherwise. Of course, these can be helpful benchmarks and necessary aspects of decarbonizing the energy grid. But if theorists are serious about a co-constitution of political and technical change as well as countering the nearly century-long depoliticization trend of electricity policy and politics, then energy democracy must bind itself with a transition that embraces contestation. The literature has waffled on that embrace. Van Veelen writes that "ED advocates often present community as apolitical" (2018, p. 658). Any energy democracy advocates that present community as apolitical are not, in fact, advocates of energy democracy. Energy democracy must wed itself to a vision of the electric sector that, in addition to local control or renewable generation or whatever other policy levers *de jour*, brings closure to the era of depoliticization. Otherwise, as Burke and Stephens note above, "if governed largely to preserve existing power relations, the renewable energy political economy may replicate existing dynamics of power." Such a replication stands as the antithesis to the calls of energy democracy, and contestation serves as the transcending strategy to avoid such a repeat.

## VII. Conclusion

Both Welton and van Veelen and van der Horst quote Mitchell in their conclusions, and for good reason (Welton 2018; van Veelen and van der Horst 2018). Mitchell writes that "the possibility of more democratic futures… depends on the political tools with which we address the passing of the era of fossil fuel" (2009). This thesis began with the prospect that, with the passing of the fossil fuel era, the electricity sector will find itself as one of few incumbent energy sectors with a viable future. So, then, the political tools with which the electricity sector is navigated, regulated, and measured determines the degrees of democratic futures. The sector could continue in its current paradigm, which relies upon a century-long tendency towards depoliticization in which regulatory and governance activities are cordoned off from agitating publics and politics in the name of security for capital. This paradigm satisfied U.S. electric consumers for decades as they received reliable electricity at reasonable rates. But with the weight of climate mitigation, new technologies, alternative markets, and other fluxes in the sector, communities are increasingly placing pressure on electricity.

Energy democracy gave voice first to activists and then to academic literatures when it picked up the term in the early 2010s. Since then, various analytic frameworks and at times competing strands characterize this still-developing theory. This thesis argues for a centering of energy democracy on community contestation by way of three case studies. While each case emphasized or ignored various strands of energy democracy theory, their common cornerstone rested on contestation. Whether it was homeless and housing advocates in Pueblo who saw agitation in front of city council as their first step or residents in the La Plata service territory who took aim at the cooperative's board elections, contestation rooted efforts presented in the cases studies. In a reflection of Mitchell's sentiments, a La Plata customer said, "we want this

transition to benefit us…I think people are starting to look at energy as something they might have control over."

Challenges lie ahead for energy democracy and the frameworks that have been established thus far. An overemphasis on local control can lead to territorializing as well as forgoing participation at state or regional levels where policy changes may be further-reaching (van Veelen & van der Horst 2018; Welton 2018). An inflated interest in consumer choice can shift the setting for political expression from the preferred deliberative democracy toward a neoliberal setting in which political sentiments are reflected through consumption (Welton 2018). Challenges also lie ahead for energy democracy in the ivory tower as theorists sift through various analytical frameworks and definitions. As the term navigates the road ahead, this thesis urges theorists to retain emphasis on contestation.

Finally, this thesis places a call for more case studies focused on the entities that theorists romanticize as the sites of energy democracy—cooperatives and municipal utilities. While this thesis argues contestation is fundamental to any U.S. service structure—IOU, muni, or coop—the energy democracy literature based in U.S. electricity apparatuses have understandably been focused on cooperatives and municipal utilities as potential loci of a movement. If so, then more case studies are needed to substantiate this claim.

As the necessity of an energy transition only escalates, the potential opening of the electricity sector similarly rises. Simultaneously, however, the momentum and path dependency of the incumbent electric model translate into vested interests in maintaining a sector partitioned from public pressures. Energy democracy envisions those partitions falling amidst a jointly political and technical energy transition. As energy democracy calls for this new paradigm, contestation must be its echo.

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