The transition to clean energy can be compromised when electrical utilities hold significant sway over the political bodies that regulate them. While much empirical evidence in the United States supports the direct election of state utility commissioners as a means to prevent regulatory capture this article argues that less attention has been paid to an important mechanism of capture: political campaign contributions. Using a qualitative comparative study of public utility commissions (PUCs) in four states, this study shows that the direct election of commissioners without a concomitant legal restriction on campaign spending by the regulated utilities insufficiently insulates regulators from industry capture. This finding is particularly important in the contemporary legal climate following the Supreme Court ruling in *Citizens United v. Federal Election Commission (FEC)*, which opened the door to unlimited corporate campaign spending, and in the face of industry resistance to climate-change mitigation in the energy sector.

**Keywords:** public utilities commissions, regulation, capture, electrical utilities, clean energy, political contributions, *Citizens United*

The transition to a low-carbon or carbon-neutral energy system is perhaps the greatest challenge facing human civilization at present. Anthropogenic climate change from burning fossil fuels raises the potential for a host of ecological and social catastrophes, including but not limited to increased droughts and heat waves, sea-level rise, and disrupted food chains, all of which could lead to refugee crises, famine, and resource conflicts (Speth, 2008). Indeed, according to many expert appraisals these impacts are already occurring and will almost certainly worsen even with emission-reduction targets (NASA, 2016). To mitigate these myriad crises in natural and human environments, countries must transition away from fossil fuels and toward low-carbon energy sources.

However, transitioning energy systems in the developed world away from fossil fuels and toward non-carbon sources represents a herculean effort. As Orr (1979) indicated nearly four decades ago, the transition away from fossil fuels will be more protracted and conflictual than any energy transition in the past because 1) demand for energy is greater, 2) the basis of energy sourcing must change, and 3) the embeddedness of energy in contemporary political and economic systems is inextricable. This latter point is of utmost importance because the transition cannot take place without the participation of the political and economic realms. And yet, the transition to non-carbon energy lags dangerously behind the pace required to avoid catastrophic climate change. Instead, “carbon lock-in” has produced large-scale institutions in government and industry that make it increasingly difficult to switch energy tracks (Unruh, 2000).

But carbon lock-in is not purely a problem of path dependence. It is also determined by a political process, where various groups with different interests act accordingly to shape outcomes in their favor (Aklin & Urpelainen, 2013). In the case of the sustainable transition to low-carbon fuels, electrical utilities form a powerful interest whose ability to shape policy cannot be ignored. Decentralized grids carrying renewable energy threaten to undermine the traditional business model of electric utilities, which in response have resisted such transformations, often quite effectively (Geels, 2014; Hess, 2016). In the face of industry intransigence, the regulatory arm of the state frequently intercedes to constrain and guide business activity.

Scholars and policy makers alike agree that regulatory bodies should be free from business influence if they are to pursue the public good. The
regulatory boards governing electric utilities, generally called public utility commissions (PUCs) in the United States, are no exception. However, there are different opinions about the best strategies for achieving PUC independence. One approach, to make the PUCs into appointed offices, is meant to insulate them from the ebb-and-flow of daily partisan politics, especially if the terms of appointment are staggered and outlast those of legislators and governors. However, utilities can influence the appointment of commissioners, and once utility-friendly policy makers are appointed, they have no public accountability. Thus, in some states, an alternative model has emerged based upon a publicly elected PUC. Under this model, the commissioners are directly responsible to voters, and presumably voters would not re-elect commissioners who failed to serve their interests. The question is, under what conditions is a PUC best insulated from utility influence and prepared to address the sustainable energy transition?

This study uses a qualitative method to examine the specific question of elected and appointed commissions and the more general conditions for increased regulatory independence. The qualitative approach employed here makes it possible to go beyond quantitative research that examines PUCs according to a binary: elected versus appointed regulators. Instead, I examine the holistic environment to develop the argument that although, ceteris paribus, elected commissions may be more accountable to the general public than are appointed commissions, the distinction may be less important than restricting the political spending of utility companies for all elected state-government campaigns (the governor, the legislature, and the PUC when elected). This research project emerged as a result of interviews, conducted with 24 state legislators about legislation in support of renewable energy and energy efficiency (Hess et al. 2014. Many respondents cited the utilities as one of the most important factors in determining the extent to which a bill would become law, and some made reference to the influence of utility spending on election campaigns for state legislators. Thus, this study examines the relationship between the organizational distinctions of elected and appointed commissions and the effects of utility spending on political campaigns.

I begin by addressing the governmental response to climate change in the United States, placing it in the context of the literature on sustainable energy transitions. The next section discusses the state of the literature on energy regulation, showing how it ignores the issue of political spending, despite a large body of work that would suggest that spending might affect the likelihood of capture. To bridge this gap, I present data from case studies of energy regulation from four states: Florida, North Carolina, Georgia, and Arizona. The data show that in the regulation of nuclear and solar energy development neither appointed nor elected commissioners avoided industry capture, but that restrictions on political spending by regulated utilities may have offered the best protection of regulatory independence. While the current legal and political climate in the United States is hostile to the regulation of political spending, the failure to do so is likely to have serious, negative outcomes, both politically and environmentally.

Climate-Change Response and Energy Transition in the United States

Until 2015, the federal government of the United States passed no legislation that would explicitly curb the emissions of greenhouse gases emitted in the country. Moreover, the Senate never ratified the Kyoto Protocol and in 2009 this legislative body refused to take up the cap-and-trade legislation passed by the House of Representatives (HR 2454). As climate-change responses repeatedly failed at the federal level, a number of state governments became the principal locus of change (Byrne et al. 2007). The 1990s and the first decade of the 2000s witnessed a notable period of innovation in energy policy at the state level (Carley, 2011). By 2003, ten states had enacted renewable portfolio standards (RPS) that mandated a portion of power be generated through renewable energy (Jaccaad, 2004; Rabe, 2007). Net-metering, which allows consumers to generate solar power and sell excess energy back to the grid, began in Minnesota in 1983 and exploded as state policy in 1997–1998 (Stoutenborough & Beverlin, 2008). In 2003, states in the New England and the mid-Atlantic regions formed the Regional Greenhouse Gas Initiative (RGGI) to trade carbon and curb climate change.

However, progress in state-level policy to fight climate change has slowed in recent years. A 2013 report on state-government legislation on this issue indicated that 26 of 121 bills for RPS and efficiency standards called for their roll-back (Center for New Energy Economy, 2013). Although clean-energy standards frequently survive legislative attempts to soften or eliminate them, some states have seen their
clean-energy policies weaken over time. In 2015, the Obama Administration bypassed the federal legislative branch and used the Environmental Protection Agency to enact the Clean Power Plan (CPP), which set emission-reduction requirements for each state. However, even the CPP grants states autonomy in determining the means by which to achieve the reductions.

The unfolding energy transition in both the United States and throughout the world has been studied from many perspectives. Scholars have addressed questions related to technology diffusion (Jacobsson & Johnson, 2000; Jacobsson & Lauber, 2006), scales of change (Schreurs, 2008; Sovacool & Brown, 2009), so-called not-in-my-backyard (NIMBY) responses in facility siting (Van der Hurst, 2007), and political backlash to sustainable energy legislation (Stokes, 2013, 2015). To the extent discernible, this is the first research to address the structure of state utility-regulatory boards and their impact on sustainable transitions toward low-carbon energy sources. In the United States, the CPP’s mandate to reduce emissions in each state suggests that PUCs will have a central role in the future of a sustainable energy transition in the country.

Utility Regulation and the Problem of Political Giving

Government policy promoting a green energy transition will, in most cases, operate through a pre-existing energy-regulatory infrastructure, which brings the study of sustainable transitions into dialogue with the literature on regulatory politics (e.g., Li et al. 2014; Slingerland & Schut, 2014). Government regulatory agencies, meant to serve the public interest, proliferated in the Western world following the Great Depression and World War II. However, scholars observing these bodies in the mid-twentieth century were quick to notice the tendency of regulators to promote the interests of those they are supposed to regulate (e.g., Bernstein, 1955; Kolko, 1963; Stigler, 1971). Although regulatory capture can be conceived broadly, it is especially applicable to regulated monopolies, such as private utilities.

When studying the capacity of regulated industries to manipulate their regulators, scholars latched onto knowledge as the vital currency in question. Industries and their representatives hold certain forms of expertise that give them power over those who would regulate them. For instance, Gormley (1986) discussed regulatory outcomes as varying with the complexity of the industry and the public importance of the service. Energy, as a high complexity/high salience issue, is more likely than other industries to result in capture.

Knowledge asymmetry in the regulatory relationship has resulted in the broad application of principal-agent modeling in the analysis of public utilities (e.g., Loeb & Magat, 1979; Laffont & Tirole, 1993). This methodology seeks to explain capture as an effect of the distance between the people demanding regulation and the people capable of executing it. For example, utility-company representatives typically have more information and expertise than the PUC commissioners, who in turn are still more knowledgeable than the government body that grants them regulatory authority—often the state legislature. Thus, the principal-agent relationship in the field of public utilities may be conceived as a three-tiered system, with the PUCs caught between the interests of the utilities and those of the legislature (Tirole, 1986; Sappington, 1991). Both the utilities and the legislature are compelled to offer commissioners incentives to align the PUC to their respective interests. These incentives may include higher salaries and perquisites or gifts and promises of future employment.

The principal-agent model could provide the means to quantitatively analyze these binary contractual relationships, but might obscure the rich array of competing relationships. In the messy terrain of regulatory politics, there is a profusion of principals and agents. One could just as easily conceive of the citizen-legislature relationship as the primary principal-agent relationship, with the legislature-PUC relationship as the secondary principal-agent relationship. In this sense, legislators (or the legislature and governor) are in the United States both a principal and an agent. In the face of such institutional complexity, it is helpful to remember the key insight at the heart of the model: namely, that incentives can sway social action to create alliances of interest. Political campaign spending can be one such incentive.

A large literature from the social sciences—especially political science, sociology, and public policy—addresses campaign financing and political contributions. It is far too voluminous to review thoroughly here, but I will describe a few studies that illustrate some general trends. That campaign spending contributes to a candidate’s chance of success is clear (e.g., Jacobson, 1978; Green & Krasno, 1988; Erikson & Palfrey, 2000). The concern that such spending impedes democracy stems from the ability of large contributors—a “donor class”—to
influence the selection of candidates, their potential victory, and, perhaps most importantly, their behavior once in office (Overton, 2004).

While repeated studies have found that contributions generally do not affect roll-call votes after controlling for ideology (c.f., Ansolabehere et al. 2003), access and agenda-setting remain consequential outcomes that are more difficult to measure (Clawson et al. 1998). Contributions can create systems of small favors that produce substantial returns to the giver, an outcome of particular interest in the realm of corporate giving. Gordon & Hafer (2005) found that firms making large political donations are less compliant with regulations and less well-monitored by state authorities. Contrarily, Sorauf (1994) observed that the role of giving, while not inconsequential, is less detrimental than the critics imply. However, his studies predate the explosion of corporate giving that emerged in the 1990s in the United States with the creation of political action committees (PACs), followed in the 2000s by so-called Super PACs, and, most recently, the 2010 Supreme Court decision in *Citizens United v. FEC* that struck down limits on corporate political spending.

Money has flooded into the American political system on an unprecedented scale, more than doubling between 2010 and 2015 (Weiner, 2015), and its effects have yet to be adequately analyzed. However, as political scientists and others further examine the relationship between political giving and political outcomes, they will likely continue to focus on federal elections. Generally speaking, this large literature on campaign spending has neither been linked to theories of regulation and capture in general nor to energy regulation by PUCs in particular.

It is surprising how little attention has been paid to political giving by regulated utilities considering the large literature on elected versus appointed regulatory boards. Because each state sets up its own PUC, the institutions come in a wide array of forms and fall under diverse political conditions, opening the door for a rich study in comparative analysis (e.g., Gormley, 1983). Early studies on the relationship between elected and appointed commissions had mixed results (Primeaux & Mann, 1986; Boyes & McDowel, 1989) and some found no relationship (Hagerman & Ratchford, 1978; Harris & Navarro, 1983; Costello, 1984). Nevertheless, the vast majority of recent studies have underscored the protective effect that direct elections produce in ensuring the likelihood that a PUC will advance pro-consumer policy (Crain & McCormick, 1984; Formby et al. 1995; Holburn & Spiller, 2002; Kwoka 2002; Besley & Coate, 2003). The present research follows from this established line of inquiry, but brings in the question of political contributions to utility regulation.

**Methods**

Studies of utility regulation are almost uniformly quantitative, relying upon rate-setting and corporate profit as the outcome of interest, neither of which addresses sustainability in the energy sector. Regarding the transition away from carbon-based energy sources and their concomitant environmental hazards, the political battles may not be easily quantified, nor is the role of PUCs in such conflicts obvious. For these reasons, I employ qualitative methods, which are ideal for “clarifying and understanding phenomena and situations when operative variables cannot be identified ahead of time [and for] finding creative or fresh approaches to looking at over-familiar problems” (Merriam, 1995). Thus, qualitative methods can open the door to a richer appreciation of the wide-ranging potential for—and effects of—utility-industry capture beyond rate-setting and return on equity.

To investigate the variable relationship between energy regulation and political contributions, I undertook a comparative case study (Ragin & Becker, 1992) based on analysis of newspaper accounts of PUC activity in four states from 2011 through 2015. I examined two states where commissioners were chosen by gubernatorial appointment (Florida and North Carolina) and two states where commissioners were directly elected (Georgia and Arizona). None of these states is an outlier in energy production, consumption, or cost (USEIA 2016), and they may be said to be generally representative of average states in the United States.

Given the limited number of cases that a qualitative study can easily engage, I chose only to sample states where all governing bodies are under control of the Republican Party, which has policy positions more favorable to business generally (and to utilities in particular), adding a conservative bias to the sample. Under such political conditions, any move by the PUC to counter the traditional business

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1 In the case of North Carolina, the Governor’s office was held by a Democrat during the first year of the five-year study period and this factor was taken into consideration during the analysis.
model of privately-owned utilities toward a sustainable-energy transition cannot be easily attributed to the will of the people or their elected officials. Essentially, I hold the state’s political ideology constant, and examine PUC structure to explain variation, beyond the basic assumptions of partisanship.

To gain information on the main policy conflicts before the PUCs in the four states, I compiled all newspaper articles referencing the state PUC from one major newspaper located in each of the states for the years 2011 through 2015. The five-year period was chosen because it followed the Citizens United decision and the mobilization of industry and conservatives against renewable-energy and energy-efficiency policies proposed after the Democratic Party sweep of elections in 2008 (see Table 1). Articles were compiled using a keyword search of full text articles in ProQuest News and Newspapers (N = 655).²

I read the population of articles and coded them for the most pressing issues before the PUC at the time, the interested parties involved, public reaction, issues involving political spending and finance, and general outcomes.³ Then I compared the case studies to one another while considering the institutional context of each state commission. Specifically, the analysis examines the PUC along three dimensions: elected and appointed, level of public input into the regulatory process for appointed commissions, and states with and without finance laws for elected commissions.

Table 1 Data on Public Utility Commissions from Four States, 2011–2015

| State           | Newspaper            | Number of Articles |
|-----------------|----------------------|--------------------|
| Arizona         | Arizona Daily Star   | 133                |
| Florida         | Tampa Bay Times      | 145                |
| Georgia         | Atlanta Journal-Consti | 243                |
| North Carolina  | Durham Herald-Sun   | 134                |

² I originally intended to gather articles from two daily newspapers in each state, but ProQuest access was limited. Newspapers were, therefore, selected by convenience based upon accessibility, with one newspaper selected per state.
³ In some particular cases, I draw upon additional newspaper articles from other sources for clarification of the issues and facts, and some information from these supplementary sources is presented in the results section.

Results: Four Case Studies

Florida

The Florida Public Service Commission (FPSC), originally created by the state legislature in 1887 to oversee railroads, was entrusted with regulating electric utilities in 1951. The commission comprises five members who serve four-year terms and are appointed by the governor and confirmed by the state senate.⁴ Until 2015, the FPSC was not required to hold any public hearings or to provide regular opportunities for citizen-consumers to participate in rulings.⁵ However, the Florida legislature created the Office of Public Counsel in 1974 to advocate on behalf of Florida’s utility consumers during FPSC hearings. As the Florida Supreme Court explained in Citizens v. Mayo, “[t]hat office was created with the realization that the citizens of the state cannot adequately represent themselves in utility matters, and that the rate-setting function of the Commission is best performed when those who will pay utility rates are represented in an adversary proceeding by counsel at least as skilled as counsel for the utility company” (Citizens v. Mayo, 333 So.2d 1, 6 (Fla.1976)).

Just prior to 2011, FPSC was embroiled in scandal. In 2009, the Commission came under investigation for ethics violations when reporters at the Sun-Sentinel discovered that commissioners and staff members were communicating on Blackberries without a paper trail and attending “lavish” parties in utility executives’ homes (Klas, 2009). These disclosures occurred at a time when FPSC was also considering a 30 percent base-rate hike, the largest increase in the state’s history. Then-Republican governor Charlie Crist refused to reappoint two commissioners whose terms were ending, and instead selected two outsiders in the hope of changing the institutional culture of the organization. In the spring of 2010, the two newly appointed commissioners voted against the 30 percent base-rate increase, but were subsequently not confirmed by the state senate following objections by the utilities. The legislature then refused to reappoint the previous Crist appointees who had also voted against the rate hike.

⁴ Until 1979, Florida had elected commissioners, but the positions changed to gubernatorial appointees following a corruption scandal.
⁵ A law passed by the Legislature in April 2015, largely in response to the problems discussed in this case study, required commissioners to hold public hearings and to attend ethics training.
(Jayakrishna, 2010). One of the two, FPSC Chairwoman Nancy Argenziano, resigned in protest.

In 2011, FPSC was refilled with new, confirmed, appointed commissioners, but scandal did not cease. The stage for new conflict had been set in 2006, when the legislature passed an energy bill with a clause allowing investor-owned utilities to collect funds from ratepayers for the construction of new nuclear facilities or to repair existing plants. The scheme, known as “Advanced Cost Recovery,” also allows the utility to collect a percentage of this cost as profit. In Florida, the investor-owned utility Progress Energy made use of the clause to begin collecting payment for a new nuclear reactor in Levy County, located in the northern portion of the state’s Gulf coast. It also collected funds to pay for repair to an existing nuclear reactor at its Crystal River plant near Tampa. However, as the program developed, the public and the media began to see it as a legislative give-away to utilities, pouring ratepayer money into private corporate coffers.

Advanced Cost Recovery became a scandal in Florida when it was uncovered in 2011 that Progress Energy had saved money by doing its own nuclear maintenance rather than contracting with experienced engineers (Penn, 2011). The in-house work subsequently cracked the containment wall of the aging Crystal River reactor, requiring further repair. As the work continued, the containment wall was fractured two more times. The FPSC continued to grant rate hikes to cover the continuing repair and expansion, despite evidence that the utility was not exercising prudence or sound judgment in conducting its own nuclear repair work, something no utility had ever attempted before. Meanwhile, the planned Levy plant was rising in estimated cost from $5 billion to $24 billion, and had pushed back its opening date from 2017 to 2024. Florida ratepayers had already been charged $1 billion for the Levy facility, including over $150 million in profit to Progress Energy, without construction ever beginning (Fleecing of energy customers, 2012).

In the end, the Crystal River plant was never reopened and no construction on the Levy plant happened. In 2012, FPSC Chairman Ron Brise said that unless the legislature altered the terms of Advanced Cost Recovery, the commissioners could do nothing to limit Progress Energy’s nuclear spending (Trigaux, 2012a). In another move seen to favor utilities, FPSC decided to cut utilities’ energy-efficiency goals by 90 percent and ended the state’s solar rebate program (Utilities win again at PSC, 2014). This series of decisions spurred a major public outcry. Newspaper response included vitriol and satire. In one guest column, the author imagined the content of a real meeting between FPSC and the new CEO of Duke Energy, where mock FPSC Commissioners named “Flattery” and “Toady” shower the CEO with compliments while offering him fresh-baked muffins and a back massage (Trigaux, 2012b). Another imagined a yard sale where Duke Energy was taking bids on the PSC (implying the company “owned” it), along with a “timeshare” of the Florida governor (Daniel, 2014).

When endorsing Crist’s 2014 opposition gubernatorial bid, now as a Democrat, the Tampa Bay Times editors stated that “[he] supports the repeal of the 2006 law that enables Duke Energy to charge ratepayers more than $3 billion for nuclear power plants that are closed or were never built. He also would pursue aggressive strategies to encourage renewable energy. The electric utilities recognize what is at stake in this election; Duke and Florida Power & Light have contributed at least $2.5 million to Scott's re-election effort and the Republican Party” (“Charlie Crist for Governor,” 2014). The editorial encapsulated public concern that utility political spending would further weaken state regulation of large energy monopolies at the expense of both the consumer and the environment.

Although Crist lost the race to regain the governorship, in 2015, the legislature responded to mounting public anger with a law that included mandatory ethics training for PSC commissioners and that, for the first time, required regular public hearings for consumers to add their testimony for PUC consideration (“Give Utility Customers a Break,” 2015). Opposition leaders in the legislature, along with consumer and environmental advocacy groups, sought to overturn the Advanced Cost Recovery clause, but as of early 2016 had not achieved this goal. They attributed their lack of progress to the influence of utilities on the legislature. As one legislator commented, “[u]tilities give a lot of money to Republicans and enough to Democrats to keep them quiet. If a legislator doesn’t go along with the utilities, they go on the attack. They put their force behind someone else and that person doesn’t get reelected” (as cited in Brown, K. & Hess, D., 2016).

A nonpartisan government-watchdog group released a report showing that the state’s four largest electric utilities had given over $18 million in political donations between 2004 and 2012 (Wilcox & Krassner, 2014). Contributions by party reflected the two-third to one-third partisan makeup of the Florida
legislature. The report strongly suggested that the funding swayed legislative behavior.

North Carolina

The North Carolina Utilities Commission (NCUC) was created by the General Assembly in 1963 to regulate the rates and services of all public utilities in the state. It has seven commissioners who serve eight-year terms and are appointed by the governor, subject to confirmation by the General Assembly by joint resolution. The governor also designates a chair to serve a four-year term.

When setting rates for public utilities, NCUC has several checks in place to reduce the likelihood of regulatory capture. First, NCUC is required by law to conduct hearings where customers have the opportunity to testify. Public hearings also provide a platform for public protest and media awareness. In 2011 and 2013, citizens held a series of street protests and press conferences to express discontent with a proposed rate hike (“Duke Energy Customers Protest Proposed Rate Hike,” 2011; Oleniacz, 2013). Second, the state established the Public Staff of the Commission in 1977 to represent consumer interests in matters pending. The Public Staff is an independent agency, not subject to the supervision, direction, or control of NCUC. Finally, the attorney general may appeal rate hikes approved by NCUC to the state’s Supreme Court, and during the period of this study repeatedly did so.

With multiple avenues for input and appeal, one might assume that regulatory capture would not threaten North Carolina, but because NCUC is an appointed body, in 2013 it found itself facing a legislative coup. Although the Republican Party took control of the state legislature in 2010, the governor’s mansion was occupied by a Democrat until 2012. In 2013, with a Republican in the executive office and their legislative majority further strengthened, a cohort of Republican legislators set about undertaking a massive overhaul of the state’s regulatory apparatus, including NCUC (Fitzsimon, 2013).

What began as a small bill to eliminate state redundancies (SB 10, 2013) exploded into a movement to remake state government in the service of regulated industries and private enterprise. The bill proposed gutting environmental and worker-protection agencies and re-staffing them with commercial industry representatives. Among the Senate bill’s many provisions, it sought to terminate the entire seven-member NCUC board and to allow the new governor to appoint replacements to a new commission of five members, now required to have industry backgrounds (SB 10, 2013).

The bill only exacerbated the concern of environmental and consumer-advocacy groups about upcoming gubernatorial appointments to the commission. The new Republican governor, Pat McCrory, had been an employee of Duke Energy for 28 years and owned about $10,000 worth of stock in the utility (Curliss & Jarvis, 2014). He had also received substantial political donations linked to his former employer over his career, with estimates ranging from $1 million to $3 million, more than any other sitting governor (Frank, 2014; Democracy NC, 2015). In the North Carolina House, Representative Mike Hager, a former Duke Energy employee, re-introduced the Senate amendment that fired all sitting NCUC commissioners and stipulated that their replacements must have expertise in business. As the bill progressed through the House, new amendments offered by Democrats and by moderate Republicans weakened the attempted power-grab. Although the bill passed the House, the two chambers refused to reconcile their versions and the NCUC commissioners were allowed to sit out the remainder of their terms.

In February 2014, public attention turned again to McCrory’s relationship to Duke Energy when a storage tank of coal ash ruptured, spilling an estimated 40,000 tons of toxic sludge into the Dan River—the third largest coal-ash spill in the nation’s history. Environmentalists had tried to sue Duke Energy three times to prevent coal-ash contamination, but had been blocked by state-level regulators in the Department of Environment and Natural Resources (DENR), appointed by McCrory (Henderson, 2015). The federal government opened criminal investigations to explore wrongdoing by Duke Energy and state regulators. In March 2015, the utility company pleaded guilty to violating the Clean Water Act as part of a negotiated settlement with federal prosecutors (Biesecker & Weiss, 2015).

6 “In appointing members to the Commission, the Governor shall appoint persons with at least five years of progressively responsible experience and a demonstrated competency in any one or more of the following areas: (1) Utility law and regulation; (2) Economics; (3) Finance; (4) Accounting; (5) Business administration.” (Notably absent were experts in energy itself – renewable or otherwise – and engineers, who might actually assess the design of capital projects.)

7 Coal ash is the toxic residue that results from the burning of coal in power plants. It is classified as a hazardous waste, as it contains mercury, cadmium and arsenic. In 2014, more than 140 million tons of coal ash were produced in the United States.
Civic groups in North Carolina took advantage of the public hearings and legal avenues to address concerns about rate hikes and coal-ash storage, but neither proved effective in garnering concessions. Newspaper accounts attest to public action on behalf of consumers and the environment, but the appointed commissioners of PSC and DENR continued the course requested by Duke Energy until finally confronted by the coal-ash disaster that civic groups had sought to prevent.

**Georgia**

The Georgia Public Service Commission (GPSC) was created in 1879 to oversee railroads and began regulating electric utilities in 1907. Originally, a three-member body was appointed by the governor, which in 1907 was increased to five commissioners elected on a statewide basis. Since 2000, each commissioner, although still elected statewide, come from one of five districts and must reside in that district. Commissioners serve staggered six-year terms.

Until 2011, Georgia legislation forbade any regulated monopoly from contributing financially to state political campaigns. Although this law did not prevent all influence by utilities and other regulated industries, it lessened the dependence of legislators on those regulated firms when it came to re-election. However, after the *Citizens United* decision, the Georgia State Legislature revisited its own campaign finance laws and repealed them as unconstitutional (Newkirk, 2011a). They did retain the provision that regulated monopolies may not contribute to the campaigns of PSC commissioners, but utilities are now free to give unlimited amounts to any other state campaign, including legislative.

Like Florida, the chief issue facing GPSC from 2011 to 2015 was nuclear power. Georgia Power was in the process of constructing the nation’s first new nuclear reactor in a generation. Sited at the existing Vogtle Electric Generating Plant, the reactor was expected to open in 2017 at a cost of $6.1 billion. However, the two previous reactors at Vogtle, finished in 1987 and 1989, had been plagued by delays and cost overruns common in the nuclear industry. When GPSC approved the new reactor in 2009, it also hired its own nuclear engineer to monitor the project and to report back regularly on its progress (Swartz, 2011a). The GPSC staff, meanwhile, sought a stipulation that would require Georgia Power, rather than ratepayers, to pay all cost overruns. The utility fought back and refused to negotiate a settlement with GPSC staff that included cost-sharing (Newkirk, 2011b). When the Commission moved forward to vote on the proposal, the utility eventually agreed on a settlement that granted GPSC the right retroactively to disallow imprudent costs (Newkirk, 2011c).

While conflicts continued over the Vogtle nuclear power plant, the salience of solar energy generation rose rapidly. However, the legal and regulatory framework in Georgia did not lay out a clear path for solar’s development. Importantly, GPSC commissioners themselves showed leadership in promoting solar in a previously coal-driven state.

GPSC Commissioner Lauren McDonald publicly urged Georgia Power to include large-scale solar in its long-term plan to be filed with the Commission in July 2011 (Swartz, 2011b). The GPSC had previously granted Georgia Power permission to purchase 4.4 megawatts of rooftop and commercial solar arrays, but only two megawatts was actually being produced. McDonald was voicing an unofficial mandate by GPSC to increase its solar generation and Georgia Power responded, promising to buy 50 megawatts of solar power by 2015 (Swartz, 2012a). Commissioner Tim Echols rallied his own base of conservative evangelicals, promoting solar in print and in person as a form of electrical independence and freedom (Echols, 2011). Meanwhile, Commissioner Chuck Eaton worked with Georgia Power to create a new plan in 2012 to increase its solar purchasing to ten times its 2012 level by 2017, providing an additional 210 megawatts, mostly through the construction of new solar farms (Swartz, 2012b).

Meanwhile, solar start-ups were attempting to create a market in solar-rooftop leasing in Georgia. In 2011, a bill to allow such a leasing scheme failed in the legislature after heavy utility lobbying. In response, one company, Georgia Solar Utilities, went before the GPSC, asking to become a new regulated utility (Swartz, 2012c). It proposed building a two-gigawatt solar farm, which could then sell power directly to consumers. This attempt also failed. However, pressure from the public continued to mount. Tea Party activists in Georgia, who wanted rooftop solar for personal energy independence, joined with the Sierra Club and other environmental activists for another legislative push at third-party leasing. Utilities accepted the legalization of third-party solar after an amendment to the bill capped individual generation to 125 percent of demand, to control the cost that utilities must pay for the excess power that is returned to the grid (Von Otnott & Valk, 2015). The bill passed the legislature with unanimous
support, and was signed by the governor in May 2015.

Arizona

The state constitution established the Arizona Corporations Commission (ACC) as a regulatory entity in 1912 as a three-member body. Arizona voters approved a measure in 2000, placed on the ballot by the state legislature, to expand the ACC to five commissioners. The measure also changed the term of office from a single six-year term to a four-year term with the possibility of reelection to one additional consecutive four-year term. The state of Arizona is overwhelmingly Republican, so the party primary for the ACC is where the most competitive campaigning takes place.

The major issue facing electric utilities and the ACC during the period of study was a conflict over the continued development of rooftop solar. In 2005, an all-Republican ACC created a renewable portfolio standard, which mandated that utilities generate 15 percent of their power from renewable sources by 2025 and that 30 percent of the total had to come from residential distributed generation. Third-party leasing services lowered the upfront cost of rooftop panels and net-metering was expected to expand so that, by 2011, utilities had become concerned about their profitability. The state’s largest private utilities, Arizona Public Service (APS) and Tucson Electric Power Company (TEP), were not opposed to solar power as long as it came from industrial scale plants, which fit their business model of centralized generation. As both utilities planned their own expansion in large commercial solar, they also began pressuring ACC to alter the regulatory framework to discourage rooftop solar.

In September 2011, arguing that it had already used up its allotted solar credits for 2011 and still had applications coming in, TEP sought reduced financial incentives for rooftop photovoltaic that would cut upfront incentives by 70 percent (Wichner, 2011). Meanwhile, APS wanted to charge their net-metering customers $50–100 per month for infrastructure, including grid maintenance and transmission (Wichner, 2013). The 2011 ACC election was dominated by the debate on renewables. The two Democrats on the Commission at the time, who ran as a “Solar Team” in 2009, lost their seats.

The once again all-Republican ACC agreed to base-rate increases, major cuts to solar incentives, and a continued delay in approving TEP’s energy-efficiency plan for the benefit of large commercial ratepayers. APS was also allowed to add a fee to its net-metering customers, although the amount was a much-reduced average of $5 per month, rather than $50–100 that the utility had proposed. New plans shifted incentives from residential solar to commercial. The ACC then waived its own mandate that utilities purchase a portion of RPS electricity from residential installations.

The solar industry and its allies saw these changes as a power-grab by the utilities to maintain their monopoly over energy and to end residential power generation. The response was a backlash from a coalition of interests, all of which supported distributed solar generation. Third-party leasing companies said that the changes would put them out of business, and environmentalists also criticized the changes. The Alliance for Solar Choice (TASC) formed in 2013 to protect the solar industry from attacks on net-metering. Added to these voices were angry conservatives who had come to appreciate rooftop solar as a form of energy independence. Citing freedom of choice against a hostile monopoly, these solar proponents joined under the banner of TUSK (Tell Utilities Solar Won’t be Killed). Together, they supported an insurgent campaign within the Republican primary to place pro-solar Republicans on ACC in 2014. However, both candidates were defeated by the utility-favored candidates, Tom Forese and Doug Little.

The selection of pro-utility Republicans may be deemed the will of the people, but the pro-solar candidates and their supporters argued that they could not compete financially to counteract the message being spread by utilities themselves in the primary. The 2014 primary conflict witnessed the dramatic escalation of campaign spending by groups external to the campaign, and therefore exempt from disclosure laws. According to Arizona law, social welfare organizations (typically with 501(c)4 status under rules stipulated by the Internal Revenue Service) are not required to disclose their donors and, since Citizens United v. FEC, have been allowed to spend unlimited amounts on political campaigns. This intrusion of so-called “dark money” from anonymous outside sources into a campaign for an elected PUC calls into question the independence and ethics of state regulators.

The majority of outside funding was used to defeat the two pro-solar Republicans in the 2014 primary. The organization Save Our Future Now spent more than $350,000 on this effort, and the Arizona Free Enterprise Club spent nearly $450,000 (Fischer, 2014a). Through these and other organizations, APS is widely believed to have spent
without resistance, even as costs mounted and the judgement of utility executives was increasingly called into question by the media and the public at large. When pressed, commissioners pointed to the cost recovery clause and said they had no legal ground to challenge Progress Energy’s nuclear work. Ratepayers provided $3.2 billion for the two nuclear projects, neither of which generated a kilowatt of energy.

In contrast, the Georgia PUC, which was led by a group of elected officials, took measures to ensure diligent cost containment by a utility whose risk was generally borne by its ratepayers. First, the Commission hired a nuclear engineer, at the utility company’s expense, to monitor the project and provide regular reports. Then, the commissioners moved to vote on a cost-sharing plan that would pay for any cost overruns out of the utility’s profit. Although GPSC and the electric utility reached a settlement that did not directly threaten the company’s profit, the months of negotiation and threat of such an outcome sent a clear signal to Georgia Power that may have restrained the firm from abusing cost recovery in the same manner as did Progress Energy in Florida.

With respect to solar energy, the two states facing major challenges to the traditional business model for electric utilities in the form of rooftop solar also saw very different outcomes. However, here the difference involved two PUCs that were both comprised of elected commissioners. In Georgia, the PSC took a cautious middle road. Commissioners worked actively with utilities to promote solar power, protecting the regulated monopolies from insurgent solar producers without actively discouraging rooftop production. They left the question of third-party leasing to the legislature, which, in turn, worked to craft a rooftop-solar bill with by-in from all interested parties, such that it passed with unanimous support.

In Arizona, the PUC also became embroiled in an internecine conflict between utilities and third-party solar providers. While the commissioners may have had legitimate concerns about the ability to finance rooftop solar through ratepayer incentives, the PUC did not appear to be leading policy as much as capitulating to utility interests. Questionable connections between regulators and regulated industries, including dark money in the electoral process, left the institution as a whole heavily tainted.

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8 They were nonetheless each under investigation by the state Attorney General for alleged conflicts of interest.

Discussion

As the above case studies show, there is, in at least certain parts of the United States, a climate of hostility between segments of the public and the regulatory bodies that are supposed to represent their interests in the electricity sector. Perception of capture is high among people in general, as represented in these newspaper accounts, but the overall responsiveness of different state PUCs is variable. Below, I discuss different PUC outcomes according to the two issues related to the sustainable energy transition that dominated the agenda in these four states during the period from 2011 to 2015: nuclear power and rooftop solar. Then, I consider the role of institutional arrangements in formulating these outcomes.

In the two states confronting nuclear reactors, with their cost overruns and profitability to investor-owned utility companies, the difference in outcome was substantial. Florida’s PUC, which is appointed, repeatedly funded Progress Energy’s nuclear work $3.2 million to influence the election of ACC commissioners, an allegation that APS has never denied (Fischer, 2014b). Checks and Balances, a watchdog group based in Washington, DC, found that in the three months prior to the election, ACC Chairman Bob Stump sent 50 personal text messages to an APS executive, 46 personal texts to the Arizona Free Enterprise Club, and 180 personal texts to candidates Forese and Little (Randazzo, 2015). The implication was that Stump had served as a middleman for utility sponsorship of the candidates through the dark money group. An attorney for Checks and Balances, seeking evidence of wrongdoing, was told the texts and the cell phone that had sent them had since been discarded and destroyed (Fischer, 2015a). While the incident offered no direct evidence of illegal activity, it did suggest that the ACC chairman, at the very least, had close personal ties to the industry he is supposed to regulate.

In August 2015, the two Commissioners not involved in the dark money scandal suggested adopting an ACC policy that would ask regulated utilities to voluntarily refrain from spending on commission campaigns.8 Commissioners Forese, Little, and Stump all opposed the policy, citing Citizens United. “It’s come down from the highest court that spending money on a campaign is free speech,” Forese said (Fischer, 2015b).
by accusations not only from the political left but also from some conservative Republican leaders.

In both energy issues discussed above, the GPSC, while certainly not without failings of its own, appears to have more adroitly avoided perceptions of capture and paved a path that protected both utility interests and the broader public in managing the development of non-carbon energy sources. Is there something about the institutional arrangement of regulation in Georgia that would produce such an outcome?

When comparing Georgia to Florida, it is immediately evident that ratepayers have more institutional voice in the former state. Indeed, the direct election of commissioners may be one of the best mechanisms to ensure that ratepayers are adequately represented. Florida’s appointed PUC showed no robust effort to protect ratepayers from financial fleecing by the state’s monopoly utilities as their counterparts in Georgia did. Such a finding is further supported by events in North Carolina, which established mechanisms for public input in the PUC process, but still fell short of direct elections. Despite mandatory public hearings, street protests by advocacy groups, and intervention by the state’s attorney general, the North Carolina PUC (and DENR) took scant action against Duke Energy on several issues of public concern between 2011 and 2015. Indeed, the legislature even came close to recalling bureaucrats who were not sufficiently friendly to industry interests.

Appointed regulators are beholden to those who appoint them. This situation does not directly lead to regulatory capture, but it opens the door, particularly if politicians are indebted to regulated utilities, a fact not lost on key observers in Florida and North Carolina. In a guest column to the Tampa Bay Times, former FPSC Chairwoman Nancy Argenziano emphasized the role of campaign donations in distorting independent regulation. She wrote, “[t]he PSC is a legislative agency that does what the Legislature wants it to do. Legislative leaders take millions from those the PSC regulates—do you really think you are getting a fair shake? The agency will continue to be a waste of tax dollars until it is removed from the Legislature’s control.” A columnist in North Carolina made a similar point following the coal-ash spill in 2014:

We created the Public Utilities Commission and Department of Environment and Natural Resources to regulate and ensure that Duke and other companies did the right thing. Regardless of their fervor in protecting the environment, employees of these agencies want to preserve their jobs. Their positions were created and supervised by elected and appointed government officials, people who won these elections and appointments because [certain other] individuals donated to…them. Once in power most want to stay in power and it is decidedly in their best interests to listen to these donors and influential people when they speak, prompting these officials to request regulators to go easy on the regulated. It is painfully obvious [that in this case] the regulators listened and complied (Campbell 2014).

Thus, advocates of reform in Florida and North Carolina both point to spending by utility companies as a central factor that affects the independence of the PUC; they focus on this issue rather than on the commissions’ appointed nature. The distinctly different outcomes in Georgia and Arizona would support their assessment.

With this knowledge in mind, we cannot be optimistic about direct elections as the primary pathway to avoiding regulatory capture that distorts or delays the transition to sustainable energy. The experience of Arizona is a cautionary tale that provides an important contrast to Georgia. Like Georgia, Arizona directly elects its utility commissioners, but on the very same issue of residential solar, the outcomes were diametrically opposed. Whereas the Georgia PUC steered a middle road until the legislature passed a bill with broad stakeholder support, Arizona’s PUC infuriated solar supporters while the institution descended into a corruption scandal that continues to plague it through today.

It is worth emphasizing that, until 2011, regulated utilities were forbidden from making political contributions in the state of Georgia. Indeed, they could not even donate as entities to legislative campaigns. Although that law was overturned in 2011 in accordance with Citizens United, its legacy carried over for the five years of this study: all seated commissioners in 2015 gained their positions prior to the change in campaign-finance law. The law had already established relative independence of the legislature and GPSC from utility influence. Especially in comparison with the other states in this study, which had no such law, its potential beneficence for citizens is compelling.
Conclusion

Public utility commissions hold tremendous sway over the energy sector at the state level in the United States and will play a vital role as the country continues its contentious and precarious transition away from fossil fuels. The success of sustainable energy policy, and equitability of its social outcomes, depends in part on the assured independence of these regulatory bodies. This study broadly confirms quantitative research on PUCs suggesting that elected commissions may better reflect citizens’ interests than appointed commissions. However, the sharp distinction between two elected commissions suggests that this broad binary variable is inadequate for establishing and maintaining PUC independence. In other words, as the Arizona case suggests, an elected commission may not be enough. In addition, a firewall is needed that prevents utilities from spending money on PUC elections. Georgia even had a similar prohibition on spending by utilities on state legislative elections, providing still greater protection. However, the Citizens United decision has made it difficult to maintain this administrative protection, at least for the legislature.

Thus, this study suggests that the distinction between elected and appointed commissions may be less important than the role of political contributions to both the elected offices (the legislature and governor’s office) and to the PUC (if elected). It is also worth remembering that financial influence is not solely limited to campaign spending. In Georgia, even without direct political contributions, many opportunities remained for influence in the regulatory sector. GPSC commissioners repeatedly went on informational “junkets” to such destinations as California and Germany (Newkirk, 2011a; Swartz, 2013). Receipt of desirable gifts, such as tickets to the Master’s Golf Tournament in Augusta, was standard and disclosed (Salzer & Swartz, 2013). Furthermore, although the utilities themselves were forbidden to give to PSC campaigns, their legal teams could, and these proved to be major sources of PSC campaign funding (Stigus, 2012). However, these financial pressures were fewer and more insulated than direct campaign contributions. With the advent of Citizens United, though, these forms of financial influence may someday seem quaint, because spending may be targeted toward general issues not directly related to campaigns.

One limitation of this study is in its design: by holding the state political ideology and culture constant, the impact of utility spending in more progressive states has not been fully explored or compared. It is possible that a progressive political culture is sufficient to ward off the influence of political spending. State governments across the United States are themselves politically diverse, and this sample, which focuses on the more conservative southern region, is a study of regulatory politics in the worst conditions for sustainable energy transition. Given the increasing dominance of the Republican Party in state governments throughout the United States, the cases provided here may be more representative than similar studies of, say, Massachusetts or Oregon.

The complete removal of corporate influence on democratic politics may be a quixotic endeavor, but making no such effort is likely to be harmful on a variety of scales. It can produce regulation failure and can open citizens to catastrophes that adversely affect human life and health, as well as environmental degradation, such as the coal-ash spill in North Carolina. It can drain millions of dollars from citizens’ pockets to feed investor-stock portfolios to no public benefit, as in Florida. Finally, it can promote the widespread belief that government is bought and sold, which erodes public trust and the legitimacy of regulatory agencies, as in Arizona. Each of these outcomes undercuts the mission of independent regulation along with the foundation of democratic governance.

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9 Of 50 U.S. states, there are 31 Republican governors, 26 of whom also have Republican-dominated legislatures. Only 7 states are controlled by Democrats.
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