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Energy security discourses and environmental protection measures in U.S. federal energy legislation: An introductory exploration

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ABSTRACT

Energy security is a term that is commonly invoked in public discourse and the policy domain to emphasize a link between energy issues and national security concerns and to frame arguments surrounding the need for a variety of energy policy prescriptions. However, a lack of consensus has emerged over the meaning, and the means to achieve the goal, of energy security. This paper provides an exploratory examination of the presence, evolution, and implications of the use of the energy security frame in three omnibus energy acts passed in the United States Congress to determine how energy security arguments are intertwined with legislative policy praxis. The research reveals the evolution of trends in the lexicon used to address energy issues, the range of problems addressed as security concerns, and the quantity and quality of environmental protection provisions. Broadly building on prior work on the concept of environmental security, the analysis contributes to the debate over the effect of framing environmental issues as security concerns, extending these considerations to the understudied realm of energy security.

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1. Introduction

In 1979, two years after the establishment of the U.S. Department of Energy (DOE) and in the wake of the 1973 and 1979 energy crises, U.S. President Jimmy Carter gave a speech titled *Energy and the national goals: A crisis of confidence*, in which he stated, “To give us energy security, I am asking for the most massive peacetime commitment of funds and resources in our nation’s history to develop America’s own alternative sources of fuel” (Carter, 1979). Carter used the term “energy security” in order to raise awareness of the need for improved energy policy, specifically advocating for policies to decrease American reliance on foreign sources of energy through energy efficiency measures and the development of renewable energy technologies domestically. In a more recent speech President Barack Obama discusses the goal of energy security as a reduction of reliance on fossil fuels from unstable parts of the world, an increase in domestic production of oil and a decrease in usage, within the broader transition to a clean energy economy (Obama, 2015).

However, the energy security argument has also frequently been invoked to justify a much broader suite of energy related policies in the era of calls to “drill baby drill” and in the aftermath of the Deepwater Horizons oil spill, leading to confusion over the meaning of the term. The lack of consensus about how to achieve energy security reflects highly divergent views on what precisely is being secured, and from what possible threats. If security is an experiential condition, securitization is a political act, and in this article we contend that semantic operability (or lack thereof) is a central component of the policy-making process. Language is perhaps the most elemental form of representation. Furthermore, theoretical clarity about security should guide policy, rather than molding already muddled theory to “fit the existing capabilities of policy machinery” (Huish, 2008), as is all too frequently the case.

A number of policy questions thus flow from the securitization of energy policy. Carter’s statement itself reflects many of the questions that result from ambiguity. On the one hand, it invokes American historical narrative to develop “America’s own” energy, implying that what is to be secured is sovereign, national territory. Does energy security, then, imply increasing the supply of domestic nonrenewable energy sources, or might it include structural changes, such as reducing energy demand through conservation and energy efficient technology, thus securing the homeland from the pernicious externalities of fossil fuel usage

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(climate change, terrorism, etc.)? On the other hand, Carter also invokes “alternative sources,” which implies systemic changes to how energy, the form of fuel actually experienced by the end user, is provisioned. And if changes are made to socio-natural systems under the policy goal of energy security, can this include distributive justice in terms of the uneven environmental impacts of energy production? In other words, broad, abstract policy goals such as ‘security’ or ‘sustainability’ leave open questions about what is to be secured—the resource itself, the American people as a totality from violence, or individual livelihoods as they are experienced differently throughout the United States? Depending upon context, scale and positionality, all of these concepts are contestable. Environmental provisions may be sidelined in the name of security, or perhaps strengthened, given the context.

In order to examine how the energy security argument has evolved in U.S. policy debates, this study begins by exploring the historical precedence for framing policy issues as security concerns, and considers the social and ethical implications of ‘securitization’ as a political act. This paper flows from a theoretical consideration of securitization—mostly in terms of how it is conceived in critical human geography—into an empirical discussion of how it has manifested rhetorically in American federal energy legislation. This helps show the relevance of theory to the policy process.

The second half of the paper details the content analysis developed to quantify the emergence and frequency of use of relevant keywords related to energy, environmental protection, and security in the three most recent federal omnibus energy acts passed in Congress: the [Energy Policy Act of 1992](#), the [Energy Policy Act of 2005](#), and the [Energy Independence and Security Act of 2007](#). The results of the analysis reveal that energy security language has played a prevalent role in framing omnibus energy legislation. The results also reveal how the language used to discuss environmental issues has evolved. The environmental provisions contained in the legislation are analyzed in detail in order to discuss the potential effect of framing energy and environmental issues as security concerns.

The findings aid a larger discussion about the political and societal forces acting to frame the debate around the relationship between energy and environmental issues in the United States. Geographers in the sub-field of critical geopolitics have had much to say about how conditions of danger or threat have been politically constructed. As [Dalby \(2010, p. 281\)](#) explains, “challenging the mappings of danger used to legitimate political power remains a scholarly task worth doing.” In addition to keeping in touch with the policies energy legislation fosters, analyzing discursive trends and understanding how meaning is constructed, reconstructed, and transformed as a discursive tool by a variety of actors helps to reveal trends in messaging that are important to scholars and policymakers alike.

2. Background and theory

In order to examine how the energy security argument has evolved, this study begins by exploring the historical precedence for framing policy issues as security concerns, and examining the evolution of the energy security argument. Framing of issues is achieved through communication that emphasizes specific values and considerations of a perceived reality in order to raise their salience to influence human consciousness ([Entman, 1993](#)). Drawing from existing literature, this paper discusses the potential for environmental protection issues to be addressed through the frame of energy security.

Invocations of danger as means to justify policy, often times with reference to external nature as the ultimate source of danger, have an extraordinarily long history ([Campbell, 1992](#); [Schlosser,](#)

[2007](#)). National security was a key discursive element underpinning the material construction of the Interstate Highway System, which was the largest public works project in American history to that point ([Kunstler, 1993](#)). Security rhetoric as applied to U.S. energy infrastructure dates back at least to the post-World War II era. President Truman established the President’s Materials Policy Commission in 1952 to inventory the United States’ natural resource supply in the event of another World War. Post-war development policy, in fact, can be read in part as a hedge against Malthusian scenarios of population-induced violent conflict leading to the ‘domino effect’ so often feared in Cold War narratives ([Greene, 1999](#); [Perkins, 1997](#); [Schlosser, 2009](#)). In these examples, the referent object of security (what is being secured) remains the state, with environmental change postulated as the source of threat.

On the other hand, environmentalists from Rachel Carson forward have invoked apocalyptic narratives to highlight the immediacy of environmental issues ([Killingsworth and Palmer, 1996](#)). For example, [Ehrlich \(1968\)](#) notorious book *The Population Bomb* deployed the bomb metaphor to re-cast population growth, which is gradual and seldom experienced by a single individual, as a more immediate, cataclysmic threat (among other alleged reasons). [Faulk \(1971\)](#) and [Myers \(1986\)](#) both penned works often described as seminal warnings that environmental issues should be seen as security issues. At the end of the Cold War, then Senator [Al Gore \(1992\)](#) famously warned that only ambitious, all-in policies akin to the Marshall Plan and Cold War Containment strategy would suffice to secure the environment from impending devastation. In these examples, the referent object of security becomes either the environment itself or the people who depend on it, while the source of threat is less frequently articulated.

It was in the absence of the Soviet Union as the pre-eminent external threat that ‘environmental security’ was codified as a policy discourse ([Dalby, 2002](#)). In an example of politics making strange bedfellows, security professionals who saw a need to justify expense budgets and environmentalists who saw an opportunity to garner political capital for their cause increasingly found consensus. These new alliances were manifested in a number of academic research programs designed to investigate the link between environmental change and conflict, such as Thomas Homer-Dixon’s Environment, Population and Security Project at the University of Toronto, and non-governmental organization work with broadly similar aims, such as the Worldwatch Institute and the Environmental Change and Security Program of the Woodrow Wilson Center in Washington, DC. The consistent reference to environmental threats over the past 20 years in the yearly National Security Strategy briefs released by the White House, and the increasing description of climate change as a source of political instability by the U.S. Department of State ([Davenport, 2014](#)) are evidence that environmental security is at least acknowledged as a valid policy concern.

However, more critical scholarship has questioned the very premise of environmental security. Many of the original critiques questioned whether ‘security’ as an analytical framework was appropriate for transboundary environmental issues ([Deudney, 1992](#)), and whether the institutions developed throughout the 20th century to engage in security matters were equipped to deal with problems not necessarily caused by external ‘others’ ([Barnett, 2001](#)). Other strands of critique exposed the Malthusianism implicit in much of the environmental security discourse ([Dalby 2000, 2002](#); [Peluso and Watts, 2001](#); [Schlosser, 2009](#)). [Schlosser \(2007, 2009\)](#) contends that post-Cold War environmental security is only a superficially new phenomenon, and that it reflects age-old epistemological structures at the root of knowledge formation and the state security apparatus.

Critical analyses of environmental security have also focused on whether non-traditional notions of security have altered the referent object of security, the genesis of threat, both, or neither. As pointed out by [Mason and Zeitoun \(2013\)](#), much of the literature revolves around a dualism between ‘territorial’ and ‘post-territorial’ versions of security. The former regards the state as a referent object (insofar as the state has often been uncritically assumed as the final guarantor of security), while the latter, broadly speaking, refocuses on the livelihoods of people (regardless of citizenship) as the referent object, and typically falls within the rubric of ‘human security.’ Human security was first developed as a concept in the early 1990s by the United Nations Development Programme ([Dalby, 2009](#)), and tends to find expression in terms of various thematic security interests, such as food security or energy security. While it opens up questions of the state structure itself as a source of insecurity, it otherwise only changes the referent object.

Security is seen amongst critical human geographers not as an ideal, objective condition to be reached through effective policy, but as ongoing political praxis that reflects dominant structures of power in society. As such, critical scholars in recent years have emphasized investigations into how security *is performed* ([Bialasiewicz et al., 2007](#)), rather than what it *is*. Securitisation theory, popularized by the Copenhagen School of International Relations, is a critical approach to the study of security that has emerged as an important analytical framework to address how environmental threats are socially constructed by policymakers (intentions) and the resultant policy implications (consequences) of the securitization of environmental issues ([Buzan et al., 1998](#); [Mason, and Zeitoun, 2013](#); [Peoples and Vaughan-Williams, 2010](#); [Williams, 2003](#)). In emphasizing securitization rather than security, the Copenhagen School is credited with highlighting security’s iterative aspects ([Buzan et al., 1998](#)). However, this is mostly in the sense of defining what does or does not constitute securitization; otherwise, as argued by [Mason and Zeitoun \(2013\)](#), the Copenhagen School still retains a territorial notion of security. The Copenhagen School argues for a multi-scalar approach to security that they allege to be non-state centric, but nevertheless assumes a “simplistic distance-decay model of threat diffusion” ([Mason and Zeitoun, 2013, p. 295](#)) and favors horizontal forms of ‘threat’ over internal, vertical structures of power that threaten human well-being ([Mason, 2013](#)).

As stated in our introduction, work in critical geopolitics continues to examine the relationship between the social construction of danger or threat and the exercise of political power. Geographers in this subfield tend to focus, as [Dalby \(2009, p. 8\)](#) puts it, on “who security is for” and “what circumstances are designated as a threat.” Note here that Dalby is not asking ‘how can we be made secure’ or ‘from where does threat emanate,’ but focuses instead on security in its political form (in the first instance) and its link to the designation of threat (in the latter instance). Security is thus seen here as a move that is made, rather than the realization of a possible condition, but without the territorial trappings of the Copenhagen School. [Dalby \(2009, p. 4\)](#) further maintains that security “is about making things, notably our consumer society, stay the same,” which suggests that security itself, at least to the extent that developed world affluence is the principle driver of global environmental change, is complicit in the material (not just discursive) construction of threat. This is a key move in understanding the political operation of security as a rhetorical act. Whereas traditional national security was used to justify the defense of territory and perhaps forward military

postures, to invoke human security is to potentially legitimate further state power over social and economic structures because human security recognizes those structures as sources of threat.¹

Thus, security is about management of populations, not simply guarding them from danger, which is why geographic studies of security apply bio-politics as an analytical lens. They do this in divergent ways, however, based on whether they follow Foucault’s or Agamben’s theories of bio-politics ([Schlosser, 2008](#)). In short, Foucault’s use of the term bio-politics comes out of his studies of a historical transition from sovereign to disciplinary to bio-power. The latter was based on the “power to *foster* life or *disallow* it to the point of death” ([Foucault, 1978](#), italics in original).² [Agamben \(1998, 2005\)](#) take on bio-politics differs in the sense that he sees that power (to foster life, or disallow it) as constitutive of the sovereign, dating even back to antiquity. Agamben comes to this conclusion by observing, in Aristotelian political theory, that within the very constitution of law lie the seeds to create ‘spaces of exception’ in which the normal legal order does not apply. The fact that the legal order provides for its own non-existence suggests a topology of the sovereign order in which subjects are neither wholly included or excluded, but rather exist along varying degrees of inclusion and exclusion based on whether life is ‘fostered’ or ‘disallowed.’ Thus, Agamben (2014, p. 65) states, “from the outset, western politics is biopolitical.”

While [Agamben \(2005\)](#) contends that bio-politics is as old as sovereignty, he also demonstrates how ‘states of exception,’ have proliferated in Western states in recent times. He points to a range of evidence, from the French Revolution to the overthrow of the Weimar Constitution in 1930s Germany (using its own provisions to do so in the form of Article 48) to the USA Patriot Act of 2001. These are all examples of the legal creation of extra-legal spaces, or in other words the inclusion of exclusion in times of emergency. Agamben importantly points out that what counts as emergency is subjective, and in any event argues that amongst Western democracies “the declaration of the state of exception has gradually been replaced by an unprecedented generalization of the paradigm of security as a normal technique of government” ([Agamben, 2005, p. 14](#)). Referring specifically to the U.S. context, he further argues that, “because the sovereign power of the president is essentially grounded in the emergency linked to war, over the course of the twentieth century the metaphor of war becomes an integral part of the presidential political vocabulary” (2005, p. 21).

While a fuller explication of bio-politics is beyond the scope of this paper, understanding its performance in “the paradigm of security as a normal technique of government” ([Agamben, 2005, p. 14](#)) is an important step in this study. [Smith \(2009\)](#) connects what Agamben cites as the normalization of states of exception under the guise of security to what others have called ‘post-politics,’ or the “biopolitical reduction of the sphere of human politics to the technical administration and management of populations” ([Smith, 2009, p. 105](#)). In other words, topics of debate that were once regarded as part of political contestation are grounded out and rendered sterile as objects of government. [Swyngedouw \(2010, p. 216\)](#) calls this “the colonization of the political by politics,” and it is facilitated by security rhetoric. As an example of this, [Swyngedouw \(2010, p. 216\)](#) argues that apocalyptic scenarios of climate change “produce a thoroughly depoliticized imaginary” precisely because ‘apocalypse’ means equal destruction for all (globally), rather than recognizing climate change as having distinct winners and losers. The all-encompassing finality of climate apocalypse obscures the politics of responsibility and justice. This then calls forth the

¹ [Devaney \(2013\)](#) identifies this as a problem in food safety governance, and [Smith \(2009\)](#) identifies the same even in the seemingly innocent field of sustainability measures.

² [Foucault \(1991\)](#) later clarified that the sovereign-disciplinary-biopolitical triad works as overlapping forms of power towards the ‘conduct of conduct’ within a population, otherwise known as governmentality.

managerial expertise of the state and capital, as evidenced by, Swyngedouw argues, the monetization of carbon dioxide. Bettini and Karaliotas (2013) make a similar argument about how the ‘peak oil’ debate has made oil itself into the referent object of security. They rightly contest the idea that warnings of oil exhaustion in any way challenge the current carbon economy on a political level. Focusing on the finitude of oil as a reason for scarcity, as peak oil advocates do, obscures both structural forms of scarcity and the environmental justice implications of petroleum extraction and combustion. By imagining the problem as one of whether and how soon the carbon economy might fall apart, peak oil advocates in fact legitimate state technocratic managerialism (drilling permits, pipeline approval, fuel efficiency standards, etc.) at the expense of a more complicated politics of justice.

This also speaks to why, as Katz (1995, p. 276) argued nearly 20 years ago, invocations of environmental apocalypse might be “politically disabling.” To be sure, some have argued that the immediacy and peril of apocalypse forces open new political possibilities (Kingdon, 2011; Strauss, 2015), perhaps as evidenced in the emerging ‘climate justice’ discourse associated with climate change (e.g., Klein, 2014). The shape those politics take remain open though, and arguably take the shape of the acute environmental justice implications of the rapid increase of hydraulic fracturing (Willow and Wiley, 2014). One could also argue that the totalizing, ‘all in this together’ logic of apocalypse both legitimates fracking (as a response to climate change) and obscures its differential impacts. This is but one aspect of how “life in liberal societies comes to be managed and modulated in the face of an ‘urgency’ or ‘crisis’” (Braun, 2014, p.50), with significant implications for environmental protection. As MacGregor (2006, p. 101), there can be “no sustainability without justice.” It is also questionable whether apocalyptic language is the most effective way of communicating scientific research findings to the public (Leiserowitz, 2007; O’Leary, 1997). The problems U.S. energy policy faces are thus not only a lack of theoretical clarity, but the possibility of the mutual contestability of environmental protection, social justice, and security as policy objectives. While it is clear that the state invokes security rhetoric towards political ends, the analysis herein demonstrates *how* this manifests in terms of U.S. energy legislation.

Or to put it more accurately, this analysis shows how U.S. energy legislation *performs* (Bialasiewicz et al., 2007) security. To say energy security legislation performs security is to recognize that its proponents invoke a ‘resonance machine’ (Connolly, 2005), in which key public figures build a following via consistent repetition of narratives that play on people’s emotions, fears, and aspirations. Bialasiewicz et al. (2007) argue that constructivist models of geopolitics tend to deny agency and assume that discourse determines thought and behavior, but to focus on performativity as a theoretical tool recognizes the role of listeners and viewers of that resonance machine. Performativity also emphasizes that it is the *repetition* of the dominant modes of representation that makes them so influential. Thus, representation works in conjunction with how the public receives and interprets it.

3. The practice of policymaking

In examining the framing of political issues, Janicke (1997) explains that policy outcomes result from the actions of actors, strategy, structural conditions, contexts, and the character of the problem. The federal approach to legislating is in many ways far from perfect in accurately weighing needs and creating legislative agendas. Instead, the process is largely subjective, and is based on the interests of policymakers, the media, pressure from lobbyists from private industry and the non-governmental sector, and the

interests of constituents. Kingdon (2011), in examining how issues become issues—how subjects come to the attention of officials, how problems are recognized and defined, and how alternatives are generated—raises the question of why an idea’s time comes when it does, noting that “there are great political stakes in problem definition” (p. 110). Agendas are presented as “the list of subjects or problems to which governmental officials, and people outside of government closely associated with those officials, are paying some serious attention at any given time” (p. 3). Jones (1978) defines agenda setting as the politics of getting problems to government. Cobb and Elder (1972) define agendas as the “set of items explicitly up for the serious and active consideration of authoritative decision-makers” (p. 86). Litfin (1994) refers to discourses as a range of policy options that are precursors to policy outcomes.

The process of agenda setting requires problems to be defined. Kingdon (2011) draws a distinction between conditions and problems, noting that “conditions become problems when we come to believe that we should do something about them” (p. 109). Kingdon further suggests that problems can be recognized when they are pressing on the system, due to the gradual build-up of knowledge among specialists in a given policy area, or based on political processes (swing of national mood, vagaries of public opinion, election results, changes of administration, and turnover in Congress) (p. 17).

If a problem appears to be more immediate, it may seem more important to address than problems that appear to be far in the future. Inversely, failing to address future problems may lead to myopic policy making, whereby the risk associated with a low probability, high consequence event is underestimated (Kunreuther, 2010). Research in the field of communications, for example, suggests that people are less threatened when problems appear to be far into the future (Onculer, 2010). Kingdon (2011, p. 94–95) explains that “focusing events” of crisis or disaster call attention to a problem and give a sense of immediacy that captures the attention of people in and around government, providing a “policy window” for political action. Communication scholars have also raised concerns about apocalyptic framing of environmental issues, for example by pointing out that people have a tendency to interpret climate change data apocalyptically (Keller, 1999), and there is concern that apocalyptic climate change rhetoric encourages a feeling of despair and helplessness that makes the problem seem too large for one individual to address (Lorenzoni et al., 2007; O’Leary, 1993). The degree of ambiguity or certainty implied in verbs such as “could” or “will” in climate change rhetoric also influences peoples’ perception of their level of agency in addressing the problem (Foust and Murphy, 2009). Apocalyptic rhetoric may also serve to discredit climate scientists as alarmists (Gleiberman, 2006; Leiserowitz, 2007; O’Leary, 1997).

Further untangling the policy process, research in the field of behavioral economics suggests that individuals are not necessarily rational in their decision-making, but instead are guided by factors, including: the information at hand, the nature of the environment where the decision is made, by what is at stake, by what others do, the manner that information or choices are described or presented, and motivations such as feelings, impulse, short-term rewards, and incentives. Emotions (affects) of fear, anxiety, and patriotism help in the assessment of risk and reward (Michel-Kerjan & Slovic, 2010; p. 4–6). Lowenstein and Lerner (2003) argue that “[a]s the intensity of immediate emotions intensifies, they progressively take control of decision making and override rational decision making” (p. 636). Framing an issue as an immediate threat to national security can make a problem seem extreme, and is therefore a powerful tool to help build support for given initiatives. Stone (1988) discusses this phenomenon, noting that, “the quest for security—whether economic, physical, psychological, or military—brings a sense of

urgency to politics and is one of the enduring sources of passion in policy controversies” (p. 69).

The fact that energy legislation is enacted sporadically, and that omnibus energy legislation has not been enacted since 2007, may suggest that energy policy has not significantly risen to the forefront of the legislative agenda, or in the context of this paper, that energy security has not been a significant concern—potentially due to lower oil prices and the proliferation of natural gas production as a result of hydraulic fracturing. However, the energy security frame is very much present in contemporary debates. In the recent rejection of the proposed Keystone XL Pipeline, the Obama Administration cited the following rationale: First, that the pipeline would not make a meaningful contribution to the economy, second that the pipeline would not lower gas prices, third that energy security would not be improved, and moreover that rejection of the proposal assists the country’s credibility as a leader in confronting climate change (Obama, 2015).

4. Methods

Congress passed three energy bills during Carter’s tenure as President: the 1977 Department of Energy Organization Act, the 1978 National Energy Act, and the 1980 Energy Security Act. Significant energy reform from the legislative branch did not emerge again until the passage of [The Energy Policy Act of 1992](#), although the concept of energy security remained present in the popular discourse. Between 1992 and 2007 Congress enacted three omnibus federal energy bills: [the Energy Policy Act of 1992](#), [the Energy Policy Act of 2005](#), and the Energy Independence and Security Act of 2007. No omnibus (meaning comprised of several items) acts have been passed in Congress after 2007. Although a variety of legislative initiatives and policies implemented by the executive branch and through other means shape energy policy, these three acts are broadly representative of energy policy thinking in the United States at the time of their passage. Due to the nature of the legislative process, with many potential contributors of various policies and legislative language, these acts best capture the priorities of lawmakers engaged in energy debates in Congress.

The content analysis quantifies trends in language usage in federal energy legislation by examining how frequently certain relevant keywords and phrases are used. Content analysis is a valuable research technique that involves the systematic assignment of communication content to categories to systematically quantify trends in communication (Berelson, 1952; Riffe et al., 2005). The content analysis also illuminates the ways that communication influences human consciousness in distinct ways (Entman, 1993). Such methods of analysis have been employed by scholars examining the press coverage of environmental issues (Foust and Murphy, 2009; Nerlich et al., 2012); the environmental advocacy strategies of non-governmental organizations (Brulle, 2010; Cox, 2010); the environmental messaging of corporations through corporate literature (Ihlen, 2009); and inconsistencies in political messaging (Carleton and Stohl, 1985).

The content analysis of the text included in the acts quantifies the prevalence of keywords related to energy, environmental protection, and security. The keywords were chosen with specific questions in mind. First, has the energy security argument been incorporated into the legislation, and if so, how? Secondly, what trends in language relating to environmental protection are present, and how do they relate to the use of the energy security frame? The keywords appear in [Table 1](#). The keyword tallies for each individual act were divided by the total number of words in each act, which provides a basis for a cross-sectional analysis comparison of the frequency of use of the keywords between the acts. The results of the content analysis help to reveal the

Table 1
Content analysis keywords.

Security	Carbon sequestration
Secure	Carbon dioxide
Securing	Carbon capture
Energy security	Global warming
Threat	Climate change
Danger	Greenhouse gas
Risk	Renewable
Terror	Bio fuel
Protect	Solar
Environment	Hydrothermal
Environmentally	Hydrokinetic
Environmental Protection Agency	Hydrogen
Sustainable	Wind
Sustainability	Hydropower/hydroelectric
Conserve	Coal
Conservation	Nuclear
Green	Clean coal
Clean	Oil
Cleaning	Natural gas
Clean Air Act	

underlying interpretive significance and trends in the use of security language.

Further analysis includes a qualitative reading of the legislation that focused on ranking the quality of environmental provisions in each act based on eight environmental areas: building efficiency, automobile standards, incentives for renewable energy, water conservation, climate change/air quality, renewable energy requirements, biofuels, and government renewable energy research. Although each Act has different areas of policy focus, the qualitative analysis seeks to define quality in each area, where present in the legislation, and compare the environmental impact of the legislation in each of the aforementioned environmental areas.

The language of federal legislation is complex, and part of the strength of the content analysis method is that it can analyze a large volume of data by simplifying the text. A limitation of content analysis by itself is that the results are only an indicator or a lens to examine phenomena, and the method is not necessarily conducive to grand conclusions without contextualizing the results and understanding the symbolic meaning of language, and employing a critical reading of the legislation.

5. Analysis

5.1. Legislative history

[The Energy Policy Act of 1992](#) (EPACT92) was introduced in the House of Representatives by Democratic Representative Philip Riley Sharp of Indiana on February 4, 1991, and signed by President George H. W. Bush on October 24, 1992. The law mandates a number of critical environmental provisions. The law requires states to adhere to energy efficiency standards set by the Council of American Building Officials. The law established alternative-fueled vehicle (AFV) requirements for government and state motor fleets. The act includes provisions for so-called clean coal technology, and for expanding the strategic petroleum reserve. The act mandates the use of low flush toilets (Duffield and Collins, 2006). Global climate change is addressed in Title XVI, which requires the Secretary of Energy to report to Congress on the implications of global climate change policies, including the generation of greenhouse gases and carbon dioxide, and US compliance with its international obligations (EPAct, 1992).

After the successful passage of the 1992 act, omnibus energy legislation would not emerge out of Congress again until 2005.

President Bill Clinton was sworn into office in 1993, but no significant energy policy was passed during his tenure. As of early 2013, no democratic president since Jimmy Carter has signed omnibus energy legislation into law. However, the energy and security linkage is apparent during the Clinton administration. For example, language linking energy concerns to security concerns is present in Clinton's 1998 *National Security Strategy for a New Century*:

Our economic and security interests are inextricably linked. Prosperity at home depends on stability in key regions with which we trade or from which we import critical commodities, such as oil and natural gas. Prosperity also demands our leadership in international development, financial and trade institutions. In turn, the strength of our ability to maintain an unrivalled military and the attractiveness of our values abroad depend in large part on the strength of our economy. (Clinton, 1998, p. 27)

Bold language linking security to environmental issues is again present in former Vice President Al Gore's 2007 Nobel Prize acceptance speech. While highlighting the importance of confronting the environmental concerns surrounding energy consumption he states, "We must quickly mobilize our civilization with the urgency and resolve that has previously been seen only when nations mobilized for war" (Gore, 2007).

Energy received increased attention from policy makers during President George W. Bush's tenure, and ultimately two omnibus acts were passed in Congress. Other legislation that deals with renewable energy was passed during Bush's tenure. The Farm Security and Rural Investment Act of 2002 contained a number of provisions to increase bioenergy, including Section 9002, which requires federal agencies to favor bioproducts when available (Yacobucci, 2012). In 2001, the president's National Energy Policy Development Group presented a comprehensive strategy to increase and diversify domestic energy production (National Energy Policy Development Group, 2001).

The Energy Policy Act of 2005 was introduced in the House of Representatives by Republican Representative Barton of Texas on April 18, 2005, and signed into law by President George W. Bush on August 8, 2005. Although the act has been criticized as a tax break for the oil industry by Grunwald and Eilperin (2005), provisions for renewable energy are included. The act requires utility companies to offer net metering to customers where the federal government has jurisdiction to do so. The act mandates a cellulosic biomass program to encourage the production of ethanol from a range of plant sources. The act also includes a renewable fuels standard (RFS) that mandates US fuel production to include a minimum amount of renewable fuel, and establishes a credit trading system (Grunwald and Eilperin, 2005).

The Energy Policy Act of 2005 has been criticized by environmentalists for exempting domestic natural gas drillers from disclosing to the public the chemicals used in the natural gas extraction process of hydraulic fracturing that would normally be required under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, and The Comprehensive Environmental Response, Compensation, and Liability Act (The Energy Policy Act of 2005). The practice of hydraulic fracturing, which involves injecting a pressurized mixture of water, sand, and chemicals into underground rock formations to release natural gas has been implicated as a source of water contamination nationwide.

The Energy Independence and Security Act of 2007 was introduced in the House of Representatives by Democratic Representative Nick Rahall II of West Virginia on January 1, 2007, and signed into law by President George W. Bush on December 19, 2007. An article in *The New York Times* called the act, "one of the largest single steps on energy that the nation has taken

since the Arab oil embargoes of the 1970s" (Broder, 2007). Sec. 922 establishes the International Clean Energy Foundation as a government entity in the Executive branch to serve long-term foreign policy and energy security goals of reducing global greenhouse gas emissions. Sec. 1002 includes the Green Jobs Act of 2007, which directs the Secretary of Labor to establish an energy efficiency and renewable energy worker training program (Energy Independence and Security Act of 2007). The 2007 Act mandates a target of 35 miles per gallon for the combined fleet of cars and light trucks sold in America by model year 2020. The final act also includes a Renewable Energy Portfolio Standard (RPS) that mandates energy producers to use 9 billion gallons of fuel from renewable sources in 2008 and 36 billion gallons by 2022 (Sissine, 2007). Provisions for accelerated solar, geothermal, and hydrokinetic energy research, and carbon capture and sequestration research are also included. The act mandates increased energy efficiency for federal buildings. Automobile emissions standards are also included that set a target of 35 miles per gallon for the combined fleet of cars and light trucks sold in America by model year 2020. The final act also includes a Renewable Energy Portfolio Standard (RPS) that mandates energy producers to use 9 billion gallons of fuel from renewable sources by 2008 and 36 billion gallons by 2022 (Sissine, 2008). The final version of the 2007 energy bill omits climate change amendments debated in Congress, including mandating greenhouse gas emission reductions through the establishment a market based cap-and-trade system (Yacobucci, 2007). The act also excludes most of the proposed increased tax provisions for the oil and gas industry that would have funded renewable energy (Sissine, 2008).

During the debate over the 2007 Energy Bill, some lawmakers argued unsuccessfully for drilling in the Arctic National Wildlife Refuge (ANWR). Long seen as a metaphorical battleground for U.S. energy policy, the ANWR debate has been ongoing, and is a useful example that highlights some of the divergent priorities surrounding energy security (Schlosser, 2006). During the Congressional debate over the Energy Independence and Security Act of 2007, environmentalists attempted to organize support to strengthen the greener aspects of the bill by arguing that energy security requires energy conservation and renewable energy production, not tapping into ANWR's reserves. Pro-drilling advocates simultaneously argued for increased domestic oil drilling, including within ANWR. It is clear that divisions over security and how to achieve it are subject to different interpretations, with the potential for environmentalists and pro-drilling advocates to fundamentally disagree on how to best achieve security. Although the law does not allow drilling in ANWR, the 2007 act allows some relaxed environmental standards for domestic oil and gas exploration and production.

At the time of writing in 2015, Congress has not passed omnibus energy legislation since 2007, although attempts have been made to rally support for new policies. The House of Representatives successfully passed the American Clean Energy and Security Act of 2009 (ACES), during the 111th Congress, but the bill failed in the Senate. The legislation included a carbon emissions trading plan that, if implemented, would have been the first of its kind in the United States. The failure of the bill's passage in the Senate has led environmental advocates to reevaluate messaging campaigns. Part of the reason that the bill may have failed is that it was seen as

³ At a lecture at Temple University (2010, October 28), Carl Pope, former Executive Director of the Sierra Club, suggested a number of issues in the messaging surrounding the American Clean Energy and Security Act of 2009 (ACES) that may have limited the popularity of the bill. Pope suggested that looking at how the bill may have been perceived as limiting economic and other opportunity is perhaps crucial to understanding why cap and trade legislation has failed to pass in Congress.

possibly limiting economic growth, raising energy prices for consumers, and/or hindering global competitiveness.³

5.2. Content analysis results

The following section presents the findings of the content analysis of legislative language in each energy act: the [Energy Policy Act of 1992](#), the [Energy Policy Act of 2005](#), and the [Energy Independence and Security Act of 2007](#). As discussed in the methodology section, the content analysis percentages were determined by dividing the number of instances of keywords by the total number of words in the document. The content analysis reveals that energy security language has played an increasingly prevalent role in omnibus energy legislation. The more than two-fold increase in the rate of occurrence of the words security and energy security between the 1992 and 2007 bills also exhibits the ‘performance’ of security through repetition. [The Energy Policy Act of 1992](#) contains 47 instances of the word “security.” The two subsequent acts saw an increase in the use of the word “security.” The frequency of the term “energy security” appeared in the 1992 act, declining slightly in the 2005 act, and then increased substantially in [the Energy Independence and Security Act of 2007](#). The use of words related to threats, including, “protect,” “risk,” “terror,” “danger,” and “threat” was then analyzed. Use of the words “protect” and “risk” increased in each subsequent act. Use of the words “terror,” “danger,” and “threat” peaked in the 2005 act. This is an interesting finding as it suggests threat words either peaked or increased after September 11th 2001.

Frequency of the terms “green,” “clean,” and “Clean Air Act” increased in each subsequent act. The word “green” is of special consideration. The 1992 act did not include any instances of the word, while the 2007 act included 114 instances. The terms “carbon sequestration,” “carbon dioxide,” and “carbon capture” all increased in use in each subsequent act. The term “global warming” was not mentioned at all until the 2007 act, although the term was included in the popular lexicon long before. The frequency of instances of the words “climate change” and “greenhouse gas” both increased over time, coinciding with the growing use of these terms in the popular lexicon over the same time period. The combined increase of these environmental keywords suggests that the acts are increasingly acknowledging greenhouse gas emissions. At first glance, it appears this increased green language corresponds with increased security rhetoric, but a deeper analysis of the policies must follow. In 2002, a political consultancy firm suggested that the U.S. administration use the term “climate change” rather than “global warming,” noting that “global warming has catastrophic connotations attached to it,” however, “climate change suggests a more controllable and less emotional challenge” ([Luntz Research Companies, 2002, p. 142](#)).

Each of the three acts proposes provisions for renewable energy. The word “bio fuel” was not mentioned in the 1992 act, but was increasingly mentioned in the 2005 and 2007 acts. The frequency of use of the word “solar” more than doubled between 1992 and 2007. Instances of the use of the words “hydropower” and “hydroelectric” peaked in the 2005 act only to decline in the 2007 act. The 2007 act however frequently cited “hydrothermal” and “hydrokinetic,” energy sources not mentioned in the previous two acts. Instances of use of the words “hydrogen” and “wind” peaked in the 2005 act only to decline in the 2007 act. The variance in instances of these specific terms may be simply attributed to changing interests. The study also examined how often instances of non-renewable energy sources are mentioned. Use of the words “nuclear,” “oil,” and “natural gas” all peaked in the 2005 act and then declined in the 2007 act. Instances of the terms “coal” and “clean coal” both steadily declined.

6. Discussion

The content analysis suggests that increased securitization, as reflected by increased use of the term energy security in federal legislation, coincides with the acknowledgement of climate change, and policies that seek to increase efficiency and promote green technology. The results of the analysis reveal an increase in the use of environmental language over time, including the keywords “environment,” “sustainability,” “conservation,” “green,” and “clean.” The results also reveal that climate change is increasingly being discussed, as the keywords “climate change” and “global warming” showed increases between the 1992 and 2007 bills. [The Energy Independence and Security Act of 2007](#) had the greatest frequency of security keywords and the greatest focus on environmental provisions. This suggests that energy issues are increasingly being framed in terms of security, and the combined weight of the content analysis results suggests that environmental protection has become an increasingly important aspect of energy policy. However, the link between security and environmental protection should not be accepted *prima facie*. Instead, qualitative analysis of energy policy, and other policy areas as well, should critically address the role of security rhetoric and the link to environmental protection outcomes.

The use of security rhetoric may transcend political ideology, as there seems to be a consensus between political parties regarding the securitization of energy issues. During the passage of the 1992 Act, Democrats held control of the House and Senate, and there was a Republican President. During the passage of the 2005 Act, Republicans held control of the House and Senate, and there was a Republican President. During the passage of the 2007 Act, Democrats held control of the House and Senate, and there was a Republican President. While it may be tempting to associate political parties with certain ideological goals and values, doing so may be misleading. After all, Jimmy Carter made “getting government off your back” a major selling point of his presidential campaign in 1976, and President Richard Nixon signed many environmental bills into law during his tenure ([Kingdon, 2011, p.11](#)).

One possible alternate explanation to the suggested relationship between security and environmental protection is that the increased use of security in the political vocabulary of federal energy legislation may be an effect of the post 9/11 policy environment, where using security to define a wide range of issues is taking place almost to the extent of banality. In the post 9/11 context, there has been increased discussion of concepts of homeland security, national security, and food security. This is reflected in post/911 legislation including: The Patriot Act of 2001, the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, and the Homeland Security Act 2002. National security concerns are raised in immigration legislation as well, including the Protect America Act of 2000 and the Secure Fence Act of 2006. To the degree that securitization of a wide range of policy arenas continues, this ongoing use of security validates [Agamben \(2005, p. 14\)](#) assertion that the declaration of the state of exception is being replaced by “the paradigm of security as a normal technique of government.”

A further limitation to this research is that the implementation of energy policy is a complex process, and this research does not investigate whether and how the policies are implemented. Congress and the executive branch periodically update environmental provisions. For example, corporate average fuel economy (CAFE) standards can be revised by legislation and/or by the executive branch and the Environmental Protection Agency (EPA). Additionally, provisions passed in bills are not always carried out due to factors including funding shortfalls, and policies may be changed or eliminated through subsequent actions by the legislative, executive, and judicial branches of government.

Additionally, different policies have different footprints, or amounts of environmental impact and policy implementation may vary by region. Further research can trace the path from rhetoric to reality in the outcomes of the provisions included in the legislation.

7. Conclusion

This paper seeks to provide an empirical analysis of U.S. energy security policy, and build out an understanding of how energy security is conceptualized, used as a rhetorical tool, and the subsequent outcomes or effectiveness of the use of energy security as a useful frame for addressing environmental issues. After President Jimmy Carter's usage of the term energy security in the 1970s, energy security has become a recognized frame used by policymakers to emphasize a link between energy issues and national security concerns. Analyzing the degree that securitization—the ongoing political praxis that reflects dominant structures of power in society—has manifested rhetorically in American federal energy legislation provides insight into the process of securitization of legislative policy-making related to energy. This research reveals that, as energy policy has evolved, so too has the lexicon used by policymakers when crafting legislation, the range of problems addressed as security concerns, the range of bills that include environmental provisions, and the quantity and quality of the environmental provisions of the legislation. Building out an understanding of the nuanced process of securitization, as well as delineating differences in policies, is an important step forward in understanding the legislative process and the desirability of framing energy issues as security concerns.

The use of security rhetoric serves as an exercise of power in the policy-making process that may be intentionally adopted by lawmakers to achieve certain goals. Framing energy issues as security concerns may be a strategy to create urgency for a particular policy and serve to elevate energy policy on the legislative agenda. The energy security argument may also be used help to build a consensus among policymakers with divergent opinions. Energy security may be an attractive bargaining point, capable of bringing together lawmakers on both sides of the political aisle. The concept may have the potential to close a political gap by having energy and environmental issues addressed in the context of national security. After all, what politician wants to be seen as soft on national security? However, actors may simply invoke national security as a rhetorical device, a way to get the legislation enacted, and may be somewhat unaware of the larger structural, distributional, and other outcomes. Securitization may be a very deliberate political act for some and a mere strategy (that may lead to perhaps unintended outcomes) for others.

The security-threat binary reflects the inclusive exclusion that Agamben (2005, 2014) identifies as being as old as sovereign authority, dating back to antiquity. That invoking security politically constructs threat (and vice versa) is nothing new, and as stated at the outset of this paper, illustrating this process is still important. On the day of the passage of the *Energy Independence and Security Act of 2007*, Congressman Steny Hoyer (MD) compared its historical relevance to the attacks on Pearl Harbor almost 66 years prior (Hoyer, 2007). While lending immediacy to energy issues has its merit, to do so by invoking an existential threat at the national scale potentially obscures finer scale policy questions with social justice implications. This may be why there is a lack of consensus as to how the elusive goal of energy security should be met. For example, energy security may be used to advocate for increased supply of domestic nonrenewable energy sources at any environmental cost, and without regard for the social impacts of the negative externalities it creates (not least of

which is climate change). To put it differently, energy policies justified via reference to Pearl Harbor-like threats leads to the 'post-political' (Smith, 2009; Swyngedouw, 2010) condition whereby the complexity of energy policy is simplified into a matter of government technocratic expertise. Questions of who is to be made secure, in what way, and through what type of alteration of what social, economic or political structure become, simply, how to import less foreign oil. Further complicating the issue is that the interpretation of what constitutes emergency is subjective (Agamben, 2005). In this way, the energy security argument is vulnerable to opportunistic political posturing, which is typically reductive by its nature. Thus, while securitization itself is very old, illustrating how it manifests in contemporary federal energy policy can help add precision and clarity to a complicated debate.

Extending from the existing arguments in the literature about the desirability of framing environmental issues as security concerns, a number of questions about the energy security frame and praxis emerge. First, energy security may be used as a rhetorical strategy to unfairly justify or champion one issue over another, possibly detracting from decision-making processes that are democratic, based on scientific research, and employ uniform risk assessment. Second, energy security may be susceptible to future misuse. Security carries rhetorical meaning as a justification for swift and deliberate action by policymakers. Linking energy and national security too closely may make future policy decisions about energy highly susceptible to future shifts in national security. Third, energy security may be losing its meaning due to overuse. The use of catastrophic or overly exuberant language to frame energy problems may erode the usefulness of the energy security argument. If every energy or environmental issue must be presented as a catastrophic risk in order to be addressed, eventual skepticism of the rhetoric may emerge. Exploring the construction of meaning in beliefs about environmental protection and the conceptual promise and analytical difficulties that those beliefs create is important for those involved in the governance process. Future research can improve upon this analysis with a more complex evaluation of environmental provisions. However, this analysis is a crucial first step to evaluating the motives of legislators, and providing a greater understanding of the discourses used to address energy issues.

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