HUSTLING WHILE YOU WAIT:

THE POLITICS OF ENERGY AND THE

DEREGULATION OF NATURAL GAS,

1938-1993

A Thesis

by

RACHEL NICOLE WALDEN

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

August 2008

Major Subject: Sociology

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ABSTRACT

Hustling While You Wait: The Politics of Energy

and the Deregulation of Natural Gas, 1938-1993. (August 2008)

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The ability of the state versus societal groups to influence the formulation of policies has long been debated in political sociology. I suggest that historical contingency theory provides insight to resolve this debate. I evaluate the explanatory power of society-centered, state-centered and historically contingent theories of policy formation using the case of deregulation of the natural gas industry. I find that capitalists in the natural gas industry unified in response to capital accumulation crises and mobilized politically to change their institutional arrangements to restore and expand profitability. These changes, in turn, expanded state structures, creating powerful mechanisms for groups in society to leverage the state to obtain favorable policy outcomes. In the natural gas industry, the key state structure was the industry's regulatory body. Once this structure was created, the natural gas industry used it to leverage the state to incorporate deregulation into its national agenda. Thus, instead of increasing state autonomy, the creation and expansion of state structures undermines state autonomy and provides powerful groups in society with the means to control the policy formation process.

NOMENCLATURE

Legislation

FUA	Fuel Use Act (Powerplant and Industrial Fuels Use Act)
NGA	Natural Gas Act
NGPA	Natural Gas Policy Act
PUHCA	Public Utility Holding Company Act
PURPA	Public Utilities Regulatory Policies Act

Agencies and Organizations

AGA	American Gas Association (representing pipelines and local distributors)
EIA	Energy Information Administration
FERC	Federal Energy Regulatory Commission (after 1978)
FPC	Federal Power Commission (before 1978)
INGAA	Interstate Natural Gas Association of America (representing interstate pipelines)
NGSA	Natural Gas Supply Association (representing producers)

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INTRODUCTION

"*Thomas Edison said that everything comes to him who hustles while he waits…I think we'll see that borne out in the natural-gas market*,"

---Warren Anderson, then-chairman of Union Carbide, addressing a pipeline lobby group in 1983 (Newkumet 1983:7)

In the early 1990s, the natural gas industry completed a dramatic transformation. Natural gas prices, which had been set by the federal government since the 1950s, were now dictated by market forces. Natural gas contracts, which had once guaranteed gas supplies for decades at a time, were now bought and sold daily as sophisticated financial tools. After nearly fifty years of deregulation, the natural gas industry in the 1990s had become a revolutionary force in energy markets (Foss 2004). Using existing theories of policy formation, this study examines the process of deregulating the natural gas industry through a qualitative, historical case analysis.

Research shows that both the state and powerful classes in society are important to understanding policy formation, but the influence of each varies historically (Prechel 1990, 2000; Akard 1992). Moreover, legislation governing energy development in general—and natural gas in particular—varies historically. This makes natural gas deregulation a good case for testing whether the key variables identified in a historically contingent theory of policy formation best explains the deregulation process.

In the narrative presented below, I will show how the state's initiation of regulation in the natural gas industry in the 1930s created a structural mechanism for the

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This thesis follows the style of the *American Sociological Review.*

natural gas industry to use to further their capital accumulation agendas. Specifically, I suggest that by manipulating their regulatory agency, natural gas industry capitalists were able to exercise more control over the formulation of policies regulating their business. Thus, expanding state structures undermines state autonomy, allowing powerful groups in society to influence state agendas and satisfy their narrow economic interests.

EXPLAINING POLICY FORMATION: THREE PERSPECTIVES

Broadly, theories of policy formation may be characterized as state-centered, society-centered, or historically contingent. Each perspective highlights different sets of variables as key to understanding policy development.

State-centered

State-centered theories emphasize the role of the state in creating and implementing policy. In *Bringing the State Back In*, Skocpol articulates a view of states as "potent and autonomous organizational actors" capable of formulating and pursuing goals independent of the demands of the societies they govern (1985:6-9). The state's capacity to act in this way reflects its autonomy. Skocpol and Feingold (1982) analyzed several New Deal regulatory policies from this perspective and suggested that the successful implementation of each was conditioned upon the regulatory agency's level of organization and willingness to act. Thus, even relatively weak and open states (i.e. the American government) can make autonomous policy contributions.

More recently, scholars have argued for the theoretical primacy of markets over states in analyzing business policy (Riain 2000). Despite the importance given to market forces, autonomous state action in other areas may still shape policies governing business. Riain, for example, has depicted state policies on military spending as "closet industrial policy" which led to the emergence of several new industries (2000:193). This conceptualization suggests the potential for autonomous state action, but falls short of specifying just when and how this happens.

Whereas Skocpol and others conceptualize the state as an actor, Laumann and

Knoke (1987) view the state as the place where policy formation occurs. To this end, the authors analyze organizational interaction in the formulation of energy policy at the federal state level from 1970 to the end of the Carter presidency in 1980. Despite their focus on activity within the state, the authors found organizational elites from business and industry were most influential in shaping national energy policy that during this period. This suggests that capitalists can shape policy formation by interacting with state actors but does not tell us much about the nature of this interaction or its persistence over time.

Society-centered

Among society-centered theories that recognize the economic basis of political mobilization,[1] elite theorists conceptualize these actors as a cohesive segment of the capitalist class (Domhoff 1967, 1978; Useem 1982). Elites act on broad class-based interests because of their similar socialization and economic positions, and translate these interests into policy as members of policy research councils and lobbying groups (see also Mills 1956). Whereas many state-centered theories fail to address variation in state influence over time, elite theory assumes that elites are always the most influential group engaged in policy formation.

In contrast, some Neo Marxists maintain that capitalists' ability to unify politically around economic interests varies (Poulantzas 1978; Prechel 1990; Akard 1992). This variation can occur across economic sectors (Poulantzas 1982), within an

[1] While pluralist theories of the state have a long tradition in the analysis of American politics, Manley (1983) argued that pluralism fails to account for the relationship between political mobilization and economic resources.

industry characterized by high levels of interdependence (Mizruchi 1987; 1989), and as an outcome of public policy itself, "because business policies do not affect all capitalist groups equally" (Prechel 1990:649). These variations create conflicts to which the state must respond.

The capitalist class still benefits disproportionately from the resulting policies because the state is dependent upon revenues (e.g., taxes) for its survival. Thus, the state necessarily shares with private industry the goal of creating and maintaining social structures that facilitate capital accumulation, preserving the capitalist enterprise as a whole (Poulantzas 1978; Prechel 1990). This condition of relative autonomy puts capitalists in a powerful position to control policy formation. Like previous theories, however, this conceptualization cannot explain when and how influence is exerted.

Historically-contingent

In contrast to other theories of policy formation, historical contingency theory treats the concepts of class unity and state autonomy as variables that may change over time (Zeitlin 1984; Prechel 1990; Akard 1992). In particular, economic cycles of growth and decline can have important consequences for understanding of corporate political mobilization as well as the state's response (Prechel 1990, 2000).[2] There are two key components to this organization-state perspective. First, while the state is most autonomous during periods of economic decline, the capitalist class mobilizes politically

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[2] This perspective draws from the Social Structure of Accumulation (SSA) framework to situate corporate capital dependence historically (Gordon, Edwards, and Reich 1982; Grant 1995). The three stages in this framework are decay, exploration, and consolidation; each of these corresponds generally to economic cycles of growth and decline. Each cycle consists of different arrangements of constraints and opportunities to which corporations must respond in order to maintain and expand accumulation.

during these times. Second, the policy changes that result can lead to the creation of new laws and state structures that "become congealed and develop a network of interests around them, both inside and outside the state" which can undermine state autonomy (Prechel 1990:665). Thus, historical contingency theory suggests answers for why and when the state acts on business policy, as well as how capitalists exert influence over the state.

I adopt this perspective here to show how changes in policy created an organizational state structure that capitalists used to advance their interests. I argue that the natural gas industry's regulatory body, the Federal Power Commission (FPC), is essential to understanding how a policy of deregulation came to be formulated and eventually implemented. Thus, in contrast to state-centered theory, state structures matter not because they ensure the state's autonomy, but because they increase powerful groups' in society control over the state (Prechel 1990).

A number of propositions may be drawn from these competing theories. However, I focus here on how each theory informs us as how and when state and non-state actors act to deregulate the natural gas industry. Thus, a state-centered perspective would emphasize how deregulation is independently deemed necessary by state actors, who then create and implement such a policy. Elite theory would characterize these actors as elites from both inside and outside government that drove the process of deregulation in the natural gas industry. Neo Marxist theories of relative autonomy would direct attention to a shifting power bloc of upper class individuals that drive deregulation in the natural gas industry.

Historical contingency theory suggests a two-step process for understanding natural gas deregulation. First, powerful capitalist class segments united and mobilized politically to pass legislation favorable to capital accumulation in the natural gas industry. Second, after these policies and laws were enacted, they provided the basis for this class segment to further advance their deregulatory agenda.

THE HISTORICAL CASE STUDY

Research Design

I analyze the case of deregulation in the natural gas industry through four historical periods. First, I describe how regulation was initiated in the natural gas industry during the New Deal era, including the creation of the Federal Power Commission in 1938. Second, I describe this Commission's efforts to implement regulations through the next two decades and the relationship that emerged from these efforts. Third, I show how this relationship enabled the natural gas industry to advance their deregulatory agenda in the 1970s, where they had been unsuccessful for decades before. The final section of the narrative depicts how these changes, once enacted, made completing the final phase of deregulation appear inevitable by the early 1990s.

I argue that neither state-centered nor class-based society-centered perspectives can account for this dynamic and interactive relationship between the state and powerful groups in its environment. A historically contingent perspective, however, can.

Methods

I adopt a multicausal framework to analyze changes in the legal regulations of the natural gas industry within their historical context. Conceptualizing policy formation as multicausal assumes that political, legal, and cultural forces can all impact social action (Weber 1958; Kalberg 1994; Prechel 2003). This enables the incorporation of a maximum of causal variables into the analysis, which is essential to examine each theory's proposed explanation of events.

To accomplish this, I have constrained my analysis to a single case of

deregulation. Whereas quantitative models often require a large sample but few variables, my case oriented method entails a small sample, allowing researchers to incorporate many variables. Although this constrains generalizability, it better accounts for the many and complex forces often involved in formulating policy (Ragin 1987). Case studies also provide fertile ground to discover new theoretical insights (Prechel 1994). By investigating propositions about causal relationships, I can test the typicality of certain causes and weigh the explanatory power of the theory that informs it (Skocpol 1984). My findings are intended to suggest theoretical refinements necessary for all scholars to better understand the policy formation process.

The Data

I collected data from a variety of sources for this study. Legislation, court cases, hearings and debates among state agencies and actors were obtained from *Congressional Quarterly* and *Lexis Nexis* databases and from publications available from the state agencies themselves. Administrative orders, rulings and hearings from the industry's regulatory commission were obtained from *Inside* FERC. I obtained reports on industry conferences and seminars, reports from trade organizations and energy economists, as well as position statements from industry publications including *Foster Natural Gas Report* and *Platt's Oilgram Journal.* I used national periodicals including *The Wall Street Journal*, *New York Times, Washington Post*, *Forbes* and *Business Week* to track the broader historical conditions and the financial condition of the natural gas industry.

In collecting and analyzing these data, I began with the variables emphasized by each group of theories. Thus, for state-centered theories I looked at the behavior of state

actors, legislation and court cases. For society-centered theories, I examined the behavior of the industry itself as well as non-state elites and other quasi-state groups (e.g., trade/interest groups and policy councils). Finally, I included all of the above and tracked the broader historical and economic conditions for historical contingency theory. The empirical information I obtained in this way helped me ask increasingly precise questions until I could tell the complete story of the deregulation process and include all pertinent groups.

The natural gas business is also quite complex and entails a rich lexicon of terms that can make it difficult to learn the issues, interests and agendas in the industry. For definitions and other technical information, I relied on the websites of industry lobby groups, especially the Interstate Natural Gas Association of America and the Natural Gas Supply Association. These actors, more so than state officials or even many energy scientists, have the best grasp of the jargon of the natural gas industry.

THE HISTORICAL NARRATIVE

Economic Crisis and Political Mobilization Leads to Regulation of Natural Gas Pipelines, 1920s and 1930s

In the early 20th century, the natural gas industry was closely connected to the electric power industry (Troxel 1937b). A few giant holding companies, linked nationwide through common stock ownership, became known as the 'power trust' because of its dominance in this important economic sector (Huitt 1954; Castaneda 1999). Market power had become so concentrated that by 1928, the Senate asked the Federal Trade Commission (FTC) to investigate the financial structure and business practices of these companies (Gruening 1931).

The FTC's investigation uncovered widespread abuses of the holding company structure. This included writing up the value of stock issued on fictitious assets, selling this essentially worthless stock to the public and funneling profits to the parent company (Federal Trade Commission 1928; House Committee on Interstate and Foreign Commerce 1933). These companies also abused their market dominance by overcharging operating companies for management services as well as raising gas and electric rates in various regions of the country (Federal Trade Commission 1928; House Committee on Interstate and Foreign Commerce 1933). Although the FTC reported these findings to Congress throughout the 1920s, Congress was unable to control these companies through legislation.

In the aftermath of the Great Depression, however, banks would no longer extend credit to these highly-leveraged companies, and their precarious financing led to massive

bankruptcies (Castaneda 1999). Further investigations condemned the holding company structure for turning these important industries into "corporate speculator[s]" to the detriment of the consuming and investing public (Splawn 1935:231). President Roosevelt responded by urging Congress to abolish the holding company with the Public Utility Holding Company Act (PUHCA) (Hardeman and Bacon 1987; Castaneda 1999).

In its early form, the proposed PUHCA consisted of three sections. The first mandated abolishment of the holding company structure in all industries, the second initiated widespread regulation of the electric power industry and the final section initiated regulation of interstate natural gas pipelines (Hiutt 1954; Libert 1956). Gas and electric utility companies mobilized politically in intense opposition to this legislation. Company executives spent millions to lobby legislators, bribe employees to support the power trust and threaten the power supply to every region of the country if all else failed (Hardeman and Bacon 1987; Gruening 1931).

After months of heated debate, Congress compromised and passed a much weaker version of the PUHCA (Hardeman and Bacon 1987). The 1935 Public Utility Holding Company Act now contained only two sections (Libert 1956; Castaneda 1999). The first section mandated regulation—not abolishment—of the holding company structure, and the second (now known as the Federal Power Act) initiated regulation of the electric power industry (Hardeman and Bacon 1987; Libert 1956). Interstate natural gas pipeline regulation was eliminated entirely from the Act.

Although spared direct regulation by the federal government, the first section of the PUHCA had an important impact on the structure of the natural gas industry (Huitt

1954). Specifically, this section directed the Securities and Exchange Commission (SEC) to oversee the geographic integration and simplification of gas and electric utility holding companies (Blair-Smith and Helfenstein 1946; Huitt 1954). This resulted in removing three of the largest utility holding companies (i.e. Electric Bond & Share Co., Standard Oil of New Jersey and Cities Service Co.) from the natural gas industry and significantly reducing the size of the fourth-largest company (i.e. Columbia Gas & Electric Co.) (Huitt 1954). This eliminated these companies' concentrated market power in natural gas while restoring the profitability of all companies in this economic sector (Blair-Smith and Helfenstein 1946; Huitt 1954).

After lengthy hearings to clarify the limited nature of federal control in the natural gas industry, Congress passed the Natural Gas Act (NGA) in 1938 to regulate interstate natural gas transportation (Libert 1956). The Act authorized the Federal Power Commission (FPC) to set prices for sales of natural gas between interstate pipeline companies and local natural gas utility companies. The Act also gave the FPC control over new natural gas pipeline construction to ensure that sound investments were made (Castaneda 1999). FPC certification coupled with rate-of-return regulations, ensured stable profits and made interstate pipeline companies "cash cows" for investors as well as the pipeline's owners, large oil companies (Castaneda 1999:112).

In summary, the preceding section highlights how economic crisis manifested in the Great Depression required a response from the state. This response entailed widespread industry regulation (i.e. the 1935 PUHCA and the 1938 NGA) because corporate political mobilization overcame the drive to abolish the holding company

structure. Regulation represented a tolerable compromise, too, because it increased certainty and restored stability, enabling capitalists to revive capital accumulation in their industries. To accomplish these goals, the state expanded its structure by authorizing the FPC to implement regulations.

The FPC Enacts Pseudo Price Controls in the Wake of Producer Resistance, 1930s to 1960s

The provisions of the 1938 NGA would facilitate the industry's continued influence in its own regulation in the future in two ways. First, the Act put the FPC in control of a very large and complex industry. This proved difficult for the five-person Commission even early on when regulation was limited to the interstate pipeline segment of the natural gas industry (Huitt 1954; Libert 1956). When the FPC attempted to determine which natural gas companies were pipelines and which were engaged in interstate commerce, natural gas companies considered this information confidential and resisted turning it over (*Wall Street Journal* July 8, 1938; *Wall Street Journal October 11, 1938*). This delayed implementation of rate regulations on interstate pipelines for several years (*Chicago Daily Tribune* February 15, 1940; Woods 1942).

As gas prices continued to rise despite controls on pipeline prices, the federal government pressured the Commission to extend price controls to natural gas producers. This led to a protracted legal battle with the FPC.[3] The Commission repeatedly denied that they had authority or the administrative capacity to regulate the producing segment

[3] These cases included *Federal Power Commission v Hope Natural Gas Company* 320 U.S. 591 (1944), *Colorado Interstate Gas Company v Federal Power Commission* 324 U.S. 581 (1945) and *Interstate Natural Gas Company v Federal Power Commission et al* 331 U.S. 682 (1947).

of the industry (Troxel 1937a; Crenshaw 1954). Instead, the Commission argued that the affiliated relationship between natural gas producers and interstate pipeline companies was not discriminatory and thus did not require oversight. Furthermore, attempting to regulate natural gas producers infringed on states' right to regulate commerce within their borders (Troxel 1937a). Thus, the very size and structure of the industry itself proved a barrier to implementing regulations.

Second, the 1938 NGA also granted Commissioners substantial discretionary powers to determine "reasonable rates" and prohibit "undue preferences" in contract arrangements (*Wall Street Journal* July 8, 1938:51; Castaneda 1999:112*)*. This discretionary power took on particular importance after 1954. In this year, the Supreme Court ruled in the final case determining the FPC's role in regulating producers. The Court ruled in favor of FPC regulation of natural gas producers, despite Commission and industry protests (*Phillips Petroleum Company v Wisconsin* 347 U.S. 642). Oilmen throughout the West criticized the ruling as a "form of socialism" that was morally "just not right" and mobilized in opposition to federal price regulations (*Washington Post* October 26, 1954:17).

Initially, this mobilization was legal in nature. By the early 1960s, these groups had filed more than ten thousand individual rate appeals, thoroughly overwhelming the Commission's effort to resolve the cases (*Wall Street Journal* August 31, 1962). This succeeded in further delaying implementation of price regulations for natural gas producers. Unable to overcome industry opposition, the Commission used its discretionary powers to abandon attempts at regulating natural gas producers

individually (*New York Times* January 24, 1960; Morriss 1960; MacKenzic 1968).

Instead of individual price controls, the FPC chose a new *area rate* system to set gas prices for producers based on the average cost of production in 23 different geographic regions. The Commission determined these costs by consulting with the natural gas producers to obtain suggested price ceilings (Morriss 1960; MacKenzic 1968).[4] Eventually, the FPC created a regulatory advisory council made up of industry executives "to advise and make recommendations to the Commission on matters concerning the regulation of the natural gas industry" (*Wall Street Journal* March 15, 1962:51). This relationship was made possible by the discretionary authority allowed the FPC through the 1938 NGA.

Through these sustained interactions, natural gas producers were able to present their case that, given the high cost of exploration and production of natural gas, producers needed incentives to continue these activities (Abele 1961; *New York Times* April 18, 1961; *Washington Post* October 12, 1961; Cowan 1964). For these companies, federally-regulated prices offered no such incentives.

This system of consultation succeeded in influencing the Commission's approach to regulation. When criticized publicly that new area rate regulations set prices too high, Commissioners defended the prices by arguing—as producers had long argued—that the

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[4] In addition to avoiding industry opposition, which was the Commission's public rationale for this radical change in tactics, other circumstances may have influenced their decision. In 1960, there were only three official Commissioners on the FPC. In this year, all three admitted in federal hearings to inappropriate interactions with the natural gas industry. This included accepting private plane trips and engaging in private, *ex parte* meetings with industry executives (*Washington Post* April 1, 1960; *Chicago Tribune* April 13, 1960; *Los Angeles Times* May 14, 1960).

consumer ultimately benefited most from "the drive towards economy and efficiency which results when each producer reaps the reward for his efforts" (Duscha 1961:A2).[5] These pseudo price controls allowed the Commission to accomplish two heretofore incompatible goals: implementing regulation as directed by the federal government and convincing this powerful segment of the natural gas industry to accept this regulation.

This represents a crucial turning point in the trajectory of the natural gas industry's regulation. Now in direct consultation with natural gas producers, the FPC set consecutively higher rates for each of the 23 producing regions (*New York Times* April 18, 1961). The Supreme Court repeatedly remanded the rulings back to the FPC because the prices were too high (*Atlantic Refining Co. et al. v. Public Service Commission of New York et al.* 360 U.S. 378 [1959]; *Federal Power Commission v. Transcontinental Gas Pipe Line Corp. et al.* 365 U.S. 1 [1961]; *New York Times* January 23, 1967). The ongoing dispute only further delayed the implementation of the pseudo price controls. Left essentially unregulated, the natural gas industry boomed during much of the 1960s, achieving record profits and growth (Duscha 1961; *New York Times* October 25, 1963; *New York Times* May 7, 1965; *New York Times* January 8, 1968).

In summary, the preceding section highlights how the policies enacted by the state enabled powerful groups in society to advance their agendas politically. Since

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[5] FPC Chairman Swidler's words surprised oil and gas industry executives as well as the public because, unlike other sitting Commissioners, the new Chairman was widely viewed as pro-consumer. He was appointed by President Kennedy and, prior to working on the Commission, Swidler spent more than 20 years working at the Tennessee Valley Authority and as a lawyer representing consumers in utility rate cases (Duscha 1961:A2).

federal regulation was limited to interstate commerce, natural gas companies could avoid regulations for years by protecting these limits through the courts. Because price controls required certain discretionary choices, natural gas producers were able to influence their regulated rate structure through close interactions with the Federal Power Commission to determine production costs. In the process, these interactions formed the basis of a relationship between regulators and the industry that the industry could use to further their agendas politically.

International Political Instability and Political Mobilization Leads to Deregulation of Some Prices and Contracts, 1960s and 1970s

With its impressive growth during the 1950s and 1960s, the natural gas industry took on a prominent role as a primary source of industrial and residential fuel (Adelman 1962; Johnson 1992). Natural gas remained closely linked to the oil industry in its production, however, and as world oil markets became increasingly unstable in the 1960s, this fueled conflicts throughout the energy sector.

The instability began with the creation of the Organization of Petroleum Exporting Countries (OPEC) in 1960. OPEC's success at exporting Middle Eastern oil supplies led to a glut in the world oil market and American oil company profits slowed as prices declined (*Wall Street Journal* May 21, 1963). These companies responded by slowing down production in a variety of ways (Adelman 1962; Pearlstine 1968; Martin 1974; Landauer 1974).

Natural gas producers, with profits already restrained by existing pseudo price controls, also withheld natural gas from the market (Pearlstine 1968; *Washington Post*

November 13, 1968; Lapp 1972).[6] This created a shortage of natural gas to which the FPC responded in 1965 by exempting hundreds of producers from area rate regulations and relaxing regulations for others (Cowan 1964; *Wall Street Journal* August 6, 1965).

Those not allowed to claim exemption mobilized to use the legal system to protect their interests. Arguing that regulated rates held prices too low and were "certain to discourage exploration for gas," these companies filed hundreds of legal appeals to delay their implementation (*Wall Street Journal* August 6, 1965; *Wall Street Journa*l August 9, 1965:8; *New York Times* August 27, 1965). They formed professional associations to increase demand for the natural gas in a variety of industries (*Chicago Tribune* September 7, 1965; *Washington Post* September 9, 1965). Eventually, the cases reached the Supreme Court where in 1968 the Court ruled against the industry and for federal price regulations (*Los Angeles Times* December 7, 1967; *Permian Basin Area Rate Cases* 390 U.S. 747 [1968];[7] Pearlstine 1968).

Unsuccessful in the courts, natural gas producers united the previously conflicting pipeline and local utility segments of the natural gas industry and mobilized

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[6] Producer withholding took many forms. These companies would 1) burn off gas as waste by-product of oil, 2) leave supplies in the ground, or 'shutting in' your wells and 3) diverting dedicated *inter*state gas supplies to unregulated *intra*state markets (Pearlstine 1968; *Washington Post* November 13, 1968; Lapp 1972).

[7] The Permian Basin Area Rate cases culminated numerous legal challenges to federal regulation by the industry, including: *Continental Oil Co. et al. v. Federal Power Commission*; *Superior Oil Co. v. Federal Power Commission*; *New Mexico et al. v. Federal Power Commission*; *Sun Oil Co. v. Federal Power Commission et al.*; *Hunt Oil Co. et al. v. Federal Power Commission*; *Bass et al. v. Federal Power Commission*; *Standard Oil Co. of Texas, a Division of Chevron Oil Co. v. Federal Power Commission*; *Mobil Oil Corp. et al. v. Federal Power Commission.* A full listing is given in the records of the Permian cases (*Permian Basin Area Rate Cases* 390 U.S. 747 [1968]).

politically (Goodman 1968). Industry groups pressed Congress and the Nixon Administration to relax existing pseudo price controls to prevent the discovery of natural gas from lagging behind demand (Rich 1969). Unable to obtain Congressional support for such deregulation, Nixon responded instead by replacing the sitting Chairman of the FPC with a more business-friendly Chairman, John Nassikas (*Wall Street Journal* September 25, 1969).

Nassikas unsuccessfully lobbied Congress for removal of the pseudo price controls, so Nixon instead created a National Gas Survey Executive Advisory Committee made up of natural gas company executives (Congressional Quarterly 1977; Anderson 1971). The Committee was to investigate the state of natural gas supplies and by the early 1970s the Committee reported that existing reserves of gas were far too small to meet future demand.

Natural gas producers' arguments caught on in Louisiana by this time as well. An appeals court there asked the FPC to raise producer price controls in that region because of what they believed was growing evidence of a serious supply shortage (Bacon 1970; *Wall Street Journal* July 19, 1971). Acting on this perceived threat to natural gas supplies, the FPC allowed natural gas producers to sell gas above existing price ceilings, delayed producers' repayment of refunds to consumers and exempted certain producers from all rate regulations (*Wall Street Journal* July 7, 1970; *Wall Street Journal* July 24, 1970; *Wall Street Journal* July 31, 1970). Despite these efforts, interstate natural gas markets in the Northeast and Midwest suffed increasingly severe shortages while producing regions in the Southwest (i.e. intrastate markets) coped with a surplus of

natural gas (*Wall Street Journal* August 20, 1970).

By 1972, the FPC declared existing producer price regulations to be "a failure" and replaced them with a single, higher, nationwide price for newly discovered natural gas (*Wall Street Journal* April 7, 1972:3; Rowe 1972a). They also deregulated prices for short-term purchases of gas made by interstate pipelines (*Wall Street Journal* April 7, 1972; *Wall Street Journal* August 4, 1972). Initially, these actions were not made public,[8] although exploration did increase substantially; natural gas production to reached a record-high level in 1973 (Rowe 1972b; Energy Information Administration 1999).

When these actions did come to light and most major cities still lacked gas supplies despite the increased production, consumers responded harshly and Congress initiated an investigation of collusion in the petroleum industry (Exxon Mobil Corp. et al. v FTC 1974; Congressional Quarterly 1977).[9] Public suspicions deepened as journalistic accounts of withholding were published, eventually producing a nearly nationwide movement against energy deregulation (Landauer 1974; Battista 1999). President Ford's efforts to deregulate natural gas prices failed under these conditions (*Wall Street Journal* January 2, 1976; Congressional Quarterly 1977).

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[8] These rulings became part of a larger investigation by Congress into the data the FPC used to determine rates, the Nixon Administration's role in promoting deregulation of natural gas prices and the petroleum industry's efforts portray a situation of increasing shortage of natural gas supplies (Schellhardt 1972) Sen. Philip Hart (D-MI) led the investigation (Mintz 1973).

[9] The Federal Trade Commission dropped its investigation in 1981. While asserting that "the dismissal did not necessarily mean that there had not been problems in the competitive performance of the oil industry," they cited numerous problems and delays in obtaining data for the investigation, as well as testimony during the discovery phase which compelled them to abort the investigation (Federal Trade Commission 1981:45).

When President Carter took office in 1977, the nation appeared to be in a serious crisis. The United States was a repeated target of Middle Eastern oil embargoes, fueling persistent uncertainty over imported energy supplies (Erickson, Millsaps and Spann 1974; Genovese 1994). Domestic sectors of the petroleum industry became increasingly powerful and demanded greater incentives to produce from domestic sources (Erickson et al. 1974). Deepening economic recession also made political debates over spending, pricing or taxation policy highly divisive, often ending in stalemate (Genovese 1994).

Carter warned the country that solving the nation's energy problems would require sacrifices from everyone, but this had to be done in order to restore economic stability more broadly (Cowan 1977b; Cochrane 1981). Initially, Carter pledged to enact a comprehensive energy policy within six months. He tapped his energy secretary, Arthur Schlesinger Jr., to create the National Energy Act with only minimal input from Congress and nearly none from industry interest groups (Cochrane 1981; Campagna 1995). Schlesenger's energy policy package attempted to induce nationwide conservation of oil and gas and shift energy use to include greater amounts coal, which was abundant domestically (*Wall Street Journal* January 13, 1978; Cochrane 1981). The package included prohibitions on natural gas use, raising natural gas price ceilings and a windfall tax on the ensuing profits to redistribute the benefits of these higher prices.

After six months, Carter's bill failed to overcome opposition from representatives of natural gas producing states (Cowan 1977a). Meanwhile, factories in 11 states remained closed for weeks due to natural gas shortages, putting hundreds of thousands of employees out of work (Rich 1977). Congress responded by granting President Carter

some emergency powers to act in the natural gas industry. The legislation 1) deregulated natural gas prices for gas sold by *intra*state pipelines—experiencing surplus—to *inter*state pipelines and (2) prohibited the use of natural gas as industrial boiler fuel (Congressional Quarterly 1989). This second provision was codified in 1978 as the Powerplant and Industrial Fuels Use Act, directing industrial natural gas users to switch to coal (Congressional Quarterly 1989).

Despite this success, Carter experienced continued opposition to his energy policy package. Particularly intense opposition came from Senator Russell Long (D-LA), who headed the Senate Finance Committee. Senator Long was an independent oil and gas producer himself and was widely known to view the interests of the oil & gas industries as synonymous with the interests of all of Louisianans (*Los Angeles Times* September 5, 1969; Motter 1994). He led the opposition to Carter's proposed windfall profits tax, instead proposing further tax incentives for natural gas production (Mintz 1973).

Unable to overcome this opposition, the Carter Administration changed tactics in 1978. The Administration arranged hundreds of meetings with executives from gas consuming industries (e.g., paper, textile, glass, steel, automobile and aerospace) to obtain their support for bill (Congressional Quarterly 1981). After consulting with the American Gas Association, Carter adopted a delayed and incremental deregulatory process. The system relied on the same principles adopted by the FPC in setting pseudo price controls on producers in the 1960s (*Wall Street Journal* April 27, 1977). Once Carter accepted the removal of his windfall profits tax, Congress enacted the law as the

Natural Gas Policy Act (NGPA) in December 1978.

The 1978 Natural Gas Policy Act is important for understanding natural gas deregulation. The Act marks Congress' first major step in deregulating the natural gas industry despite years of political mobilization by this powerful segment of the energy sector. This suggests that mobilization alone does not necessarily lead to successful political outcomes for these groups; the historical context matters.

Because the petroleum industry was so crucial to resolving the energy crisis, and as believed by the Carter Administration, crucial to reverse the nation's economic decline, they were able to capitalize on these crises to make deregulation appear to be the only rational solution.

Furthermore, including the historical process leading up to enacting the NGPA highlights the crucial role played by the FPC in creating this deregulatory policy. The way that the Act deregulates natural gas prices reflects earlier FPC rulings to deregulate prices. In this way, the NPGA is not a novel policy change initiated by state actors (see Skocpol 1985), but merely an extension of earlier efforts by the FPC to satisfy the natural gas industry's capital accumulation agendas. These efforts, in turn, were a response to the power of industry resistance to and manipulation of existing state legal and regulatory structures. Thus, the previous section highlights how natural gas interests used the state's structure to control the formulation of state policy so that it supported their own capital accumulation agendas.

The Emergence of a Spot Market, Conflict over Prices and Neoliberalism Leads to Deregulation of Natural Gas Contracts, 1980s and early 1990s

By the 1980s, conditions in the natural gas industry had been fundamentally changed. In fact, economic conditions worldwide had been deeply altered by the persistent recession and international crises of the 1970s (Harvey 2005). In the United States, some of the country's most powerful business lobby organizations were formed in response to this instability (Harvey 2005).

These organizations united around neoliberalism, an incentive-based capital accumulation agenda that eschewed regulation and was ambivalent toward consumer protection (Akard 1992). This led to political mobilization so successful that it convinced the Carter Administration to go against party ideals and deregulate not only new natural gas prices, but also the airline, trucking, railroad, bus and banking industries (Eizenstat 1994:9; Hargrove 1994).

In the natural gas industry the 1978 NGPA reflects business' successful rearticulation the purpose of regulation in neoliberal terms. Instead of price and contract regulations protecting the consumer from exploitation by the natural gas industry, now regulation was meant to aid the efficient allocation of natural gas supplies in the open market. Under neoliberal ideology, efficiency is incentive-based, so high prices are not exploitative, but are a necessary mechanism to ensure the continued supply of gas. As long as high prices remain competitive, the cost is seen as legitimate.

Crucially, the NGPA specifically directed the natural gas industry's regulatory commission to create and maintain this competitive structure (Energy Information

Administration 2005). Whereas the FPC in the 1970s was publicly vilified for raising natural gas prices in response to industry pressure, the Commission in the 1980s, now called the FERC,[10] was legally bound to do so (*Foster Natural Gas Reports* September 10, 1981). This legal legitimacy was also bolstered by the fact that price deregulation through the NGPA brought about the results that the industry and their regulatory commission had argued it would.

Higher prices did increase natural gas production, as the industry had long argued. Just one year after the Act was passed *Business Week* reported that these new prices brought producers an additional $4 to $5 billion in revenues (December 31, 1979:123).[11] This resulted in a rapid expansion of natural gas production, and the nation quickly shifted from a chronic shortage of natural gas to over-abundance.

Industrial gas consumers, cut off from natural gas supplies during the shortages of the 1970s, responded immediately. These large corporations mobilized politically to demand greater access to natural gas, warning that layoffs and bankruptcies would result if they were forced to continue relying on coal and fuel oil (Atlas 1980; Martin 1980; Randolph 1980). Natural gas producers and pipeline companies, eager to get rid of excess supplies withheld during the 1970s when prices were low, joined these companies (*Business Week* July 25, 1977). The FERC responded with Order 30 allowing direct

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[10] The Federal Energy Regulatory Commission (FERC) replaced the Federal Power Commission (FPC) as directed by the Department of Energy Reorganization Act of 1977.

[11] In fact, any business engaged in any aspect of oil and gas production benefited from the 1978 NGPA. For example, the new emphasis on coal use was expected to generate $20 to 30 billion for engineering and construction businesses to build new coal gasification plants, $10 to $15 billion for equipment makers, and $17 billion for transportation equipment suppliers (*Business Week* December 31, 1979:123).

purchases of natural gas by industrial consumers from producers with surplus gas supplies. These unregulated, short-term transactions were called *off-system sales* (*Oil & Gas Journal* April 14, 1980).

Order 30 provisions extended existing FERC regulations enacted in response to the natural gas shortages of the 1970s (Rowe 1975; Doane & Spulber 1994). Similar short-term sales provisions had been incorporated into the 1978 NGPA, and these efforts cumulatively created a *spot market* for buying and selling natural gas.[12] This is crucial to the continued trajectory of deregulation for two reasons: 1) spot sales represent a dramatic departure from the traditional system of contracting in the natural gas industry 2) that would eventually expand in use to become a new market-based mechanism for minimizing risk in the volatile energy sector: the futures market (*Oil & Gas Journal* October 5, 1981; Harvey 2005). Under neoliberalism, any market mechanism is seen to be a more rational alternative to federal regulation.

The shift to spot sales of gas was revolutionary in the industry and this created tremendous conflict among industry segments, deepened industry instability and created pressure for further deregulation. The conflict began between natural gas producers, early adopters of spot sales through Orders 533 and 30, and natural gas pipelines, legally bound to long-term, low-priced contracts with captive residential customers (*Inside*

[12] The NGPA contained several provisions that facilitated the growth of a spot market. The higher price ceilings allowed for new gas were extended into the intrastate market, making these sales more attractive to intrastate firms. Section 311 of the NGPA also deregulated interstate pipeline transport of short-term gas sales to industrial companies, increasing these firms' willingness to transport gas for others.

FERC January 12, 1981).[13]

Initially, interstate pipeline companies refused to transport the gas sold by producers in short-term, or spot, sales (*Business Week* July 25, 1977). Instead, pipelines sold their own cheap gas supplies to industrials, saving expensive, newly deregulated gas supplies for their captive residential customers (*Los Angeles Times* August 16, 1982; *New York Times* January 8, 1983). As a result, prices for residential natural gas consumers rose dramatically and many large industrial users could not get access to the natural gas supplies they had already paid producers for. Occurring under conditions of a persistent oversupply of natural gas, this only worsened conditions in the already chaotic market (Berry 1983; General Accounting Office 1982).

By 1982, conflict worsened to the point where Congress was prepared to roll back the deregulatory measures so far enacted in the natural gas industry. Representatives of natural gas consumers, both industrial and residential, introduced legislation to make all interstate pipeline companies *common carriers* of natural gas (Taylor 1982). This would eliminate pipelines' choice in contracting arrangements and force them to carry gas for every customer, with oversight from the federal government. President Reagan, however, saw this as a dangerous attempt to re-regulate the industry and asked the FERC to resolve the issue instead (Taylor 1982; Congressional Quarterly 1985). The FERC initiated an investigation into discriminatory practices by pipeline

[13] Historically, federal regulation of interstate pipelines required these companies to sign so-called take-or-pay contracts with natural gas producers. Take-or-pay contracts ensured a regular supply of gas to consumers because they spanned decades, requiring pipelines to take gas for the life of the contract, with substantial fees assessed by producers for all volumes not taken (*Inside FERC* January 12, 1981; *Wall Street Journal* July 29, 1981; *Business Week* August 2, 1982; Masten and Crocker 1985).

companies. This investigation would not be completed until 1987 (Berry 1983; *Inside FERC* January 5, 1987).[14]

Meanwhile, the FERC urged pipeline companies to come up with their own—market based—solutions to the problem (*Foster Natural Gas Report* August 4, 1983). Transco Companies, an interstate pipeline company headed by CEO Kenneth L. Lay, was first to do so. Lay saw the potential for the existing spot market in natural gas to become a sophisticated financial market for trading natural gas futures (*Inside FERC* June 28, 1982). To advance this agenda, Lay created his own industrial sales program and contract carriage program, relying on obscure provisions included in FERC Order 30 (Fein 1983). He then held seminars nationwide to show off his efforts. These seminars were attended by members of the industry, regulatory commissioners, and members of Congress (*Foster Natural Gas Report* September 15, 1983).

These efforts led to a radically different—and highly profitable—way of doing business for pipeline companies: natural gas marketing (Lueck 1983; Burrough 1984; Burrough 1985; Bayless 1986; Vogel and Bluestone 1988). By acting as a broker between producers and large consumers of natural gas, interstate pipeline companies were no longer obligated to purchase in full the supplies of gas they sold, but remained central to the sales process through their brokering arrangements. This created a new source of revenue for pipelines, and made transporting gas for others more lucrative by

[14] Although many involved in the investigation recounted numerous instances of anticompetitive behavior by pipeline companies, none would support punitive measures (*Inside FERC* January 5, 1987). The FERC argued further that requiring more than increased reporting by pipelines would be “inconsistent with the pro-competitive policy underlying the Natural Gas Policy Act” (*Inside FERC* January 5, 1987:1).

creating additional fees for their brokering services (Lueck 1983; Bayless 1986).

By 1984, local utility companies complained to the FERC that the existing conditions of partial deregulation hurt their businesses. They argued that pipelines' special marketing programs (i.e. industrial sales and contract carriage programs) were discriminatory because pipelines could now choose to sell to any customers they wished, while regulations forced utilities to continue buying gas from pipelines (Burrough 1985). The FERC responded with Order 380, removing this regulatory requirement for utilities (Energy Information Administration 2005).

Utilities could now buy gas from any seller, and many turned to the spot market to find the cheapest supplies (Saunders 1986; Wilson and Norman 1986). This significantly expanded spot market sales of natural gas. For example, in 1983—the year before utilities' purchase contracts are deregulated—spot sales made up only 8% of all gas sold interstate, but by 1986, 35% of all gas was sold in the spot market (Paul 1986:1). The increased competition helped keep prices low when natural gas price decontrol, initiated by the 1978 NGPA was completed in 1985 (Bayless 1987).

As stability returned to the industry and prices remained low, industry trade groups touted natural gas as an excellent, environmentally friendly alternative to oil and coal (Hamilton 1988). Natural gas companies capitalized on their fuel's increasingly favorable reputation by urging the FERC to remove 1970s-era use restrictions on natural gas for generating electricity. The FERC responded by relaxing restrictions in the Public Utilities Regulatory Policy Act (PURPA) to allow natural gas companies to supply electric utilities with gas as a back-up fuel (Hargar 1988; *Electric Utility Week.* 1989).

These favorable conditions also made it possible for oil industry representatives in Congress (e.g., Phil Gramm, R-TX) to repeal the Powerplant and Industrial Fuels Use Act of 1978 (Saunders 1987).[15] This further expanded demand for natural gas and new natural gas cogeneration facilities proliferated (Hagar 1988; Ivey and Grover 1989).

Interstate pipeline transport of natural gas was still unreliable, however. The FERC had tried throughout the 1980s to make transporting gas for others more attractive to interstate pipeline companies. Initially, they offered pipelines deregulated contracts if they agreed to transport the gas for others (Doane and Spulber 1994). When companies did not respond, the Commission allowed them to pass on 50% of their contract renegotiation costs to customers (Daniels 1987). As a result, transporting gas for others jumped from nearly zero in 1986 to making up 19% of the gas pipeline companies transported in 1987 (Doane and Spulber 1994:11). Still some companies resisted, holding out for more concessions.

By the end of the decade, however, so much had changed in the natural gas industry that Congress saw the remaining price controls on natural gas as largely irrelevant (Congressional Quarterly 1993). By enacting the Natural Gas Wellhead Decontrol Act in 1989, Congress eliminated all remaining producer price controls (Congressional Quarterly 1993). Like previous deregulatory legislation, the Act raised prices incrementally over the next three years.

It was in this heady atmosphere of expanding markets and deregulated prices that

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[15] Gramm was a prominent conservative southern Democrat during this period and consistently a top recipient of large oil industry campaign contributions (Green and Newfield 1980; *Washington Post* March 23, 1980; Taylor 1982).

Enron Corp., the natural gas industry's largest pipeline company and headed by Ken Lay, launched its innovative Gas Bank scheme (Foss 2004). This sophisticated financial scheme was crucial to establishing a futures market in natural gas because it pooled multiple smaller gas contracts to provide the funding for these complex financial transactions (Foss 2004). It would take years and Enron's complete financial collapse before the dangerous and speculative nature of these deals would be realized, however.[16]

These lucrative new arrangements greatly expanded the market for natural gas. By 1993, nearly 95% of all natural gas was sold on the spot market, brokered by interstate pipeline companies (Castaneda 1999:192). Sales of natural gas had become so prevalent that the FERC made a final concession to natural gas pipeline companies. The Commission allowed these companies to pass on to customers 100% of the restructuring costs required to become contract carriers of natural gas (Hayes 1992). With all pipelines now in compliance to a new system of short term sales and transport of natural gas, this is widely seen as completing the deregulation process that began with the passage of the 1978 NGPA (Sanders 1981; Doane and Spulber 1994; MacAvoy 1995, 2000; Castaneda 1999; Foss 2004).

In summary, the legal changes made to natural gas regulations in the 1970s and carried through in the 1978 NGPA fundamentally changed the political-legal arrangements governing the natural gas industry. These changes created conflicts in the

[16] The success of this early Gas Bank concept led to Jeffrey Skilling's broader "asset-lite" strategy of engaging in complex financial transactions with only paper assets (Foss 2003). What we know now, however, is that while these schemes brought individual firms like Enron huge profits, they proved of little benefit to the public. Enron shareholders lost their futures when the company collapsed due to these schemes.

natural gas industry to which the state had to respond. Under the business-friendly, neoliberal conditions of the 1980s, this response was formulated as further deregulation of the industry.

Here again as in earlier decades, the FERC was crucial to the success of further deregulation, but for different reasons than before. In the 1960s and 1970s, the natural gas industry manipulated their regulatory commission to achieve their agendas and experienced public backlash afterward. In the 1980s, however, this same organization was seen as the most appropriate state structure to direct continued deregulation. Given this alignment of industry interests and state agendas, nearly all arrangements were already in place by the end of the 1980s so that completing the deregulation process appeared to be inevitable.

CONCLUSION

In this study, I analyzed deregulation in the natural gas industry in order to address some enduring theoretical debates in political and historical sociology. These debates revolve around the question of who has the greatest influence in the formulation of business policy in the United States.

At the outset of this study, I proposed that state centered would view deregulation as independently deemed necessary by state actors, who then create and implement such a policy. Although state actors consistently *attempted* to independently institute policies in the natural gas industry, the power of the industry to influence the state consistently undermined these efforts. For example, in the 1930s, the political mobilization by holding company executives succeeded in weakening the Public Utility Holding Company Act so that it no longer mandated abolishment of the holding company structure. In the 1970s, the petroleum industry succeeded in resisting Carter's independently created energy policy package until he accepted the removal of his windfall profits tax. In the 1980s, industry resistance was unnecessary because so much industry-directed regulatory change had already occurred. Thus, in terms of deregulating natural gas, state autonomy did not drive policy formation, as Skocpol (1985) might argue. Furthermore, this study shows *how* the industry influenced policy formation, as Laumann and Knoke's (1987) analysis did not.

Society centered theories lack the necessary specificity to explain natural gas deregulation. Elite theory (Domhoff 1967, 1978) would characterize deregulators as elites from both inside and outside government that drive the process of deregulation in

the natural gas industry. Although my analysis could—broadly—support such a claim, the theory lacks the theoretical precision to explain why elites are unsuccessful at shaping policy. For example, elites in the petroleum industry consistently failed to achieve their policy goals for decades after natural gas producers became regulated in 1954 (i.e. with the Phillips Petroleum ruling).

Neo Marxist theories of relative autonomy (Poulantzas 1978, 1982) correctly would direct attention to a shifting power bloc of upper class individuals that drive deregulation in the natural gas industry. This explanation, however, cannot explain why this shift occurs. Finally, neither this nor other theories of policy formation can explain the crucial role played by state structures in facilitating the process of policy formation.

What these alternative explanations lack is a sensitivity to the way that historical conditions affect the influence of state actors versus powerful groups in society. By situating the policy formation process in its historical context, I am able to determine more precisely the conditions under which groups with shared interests act to advance those interests (Tilly 1981; Prechel 1990). This goes far to specify how different groups shape policy under different historical conditions.

A historically contingent perspective of policy formation highlights two key findings from this study. First, as the nation underwent a transition from decaying capital accumulation to exploration for new forms of accumulation (Gordon et al. 1982), capitalists used the conditions of economic crisis to mobilize politically and advance their interests. Specifically, the economic decline manifested in the Great Depression in the 1930s and the recession and energy crises of the 1970s, enabled powerful capitalist

class segments to influence state actors to pass legislation favorable to capital accumulation in the natural gas industry.

The second key finding predicted by historical contingency theory, is that these interactions made the creation of new state structures possible. Specifically, political mobilization by the natural gas industry in opposition to the 1938 PUHCA and in support of the 1978 NGPA led to the creation of the FPC. As conflicting interests aligned around regulation through the FPC and later the FERC, this provided the basis for this class segment to further advance their agenda politically. Thus, instead of increasing state autonomy, the extension of these new structures made it possible for the natural gas industry to exercise even more control over the state (Prechel 1990). As Prechel (1990) also found in the steel industry, the expansion of state structures into the economy facilitates capitalists' control over the state, not the other way around.

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