

The Regulatory Response to Crisis: Crisis, Congress, and the Federal Energy Regulatory
Commission

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ABSTRACT

This study is designed to examine how much of an impact crisis or the perception of a crisis might have on Congressional policy making for private electric utilities and how the Federal Energy Regulatory Commission (FERC) reacts to Congressional action or inaction in such cases. Also, where appropriate the influence and impact of other actors in the different crises are mentioned. The first set of findings came from the era running from 1977 to 1986 as FERC was created by Congress in 1977 to address in part the stagflationary crisis of the 1970s of which electric utilities played an important role. Next, the Congressional response to the Gulf War and FERC's reaction to it is analyzed as in that case legislators were reacting to the perception that another energy driven economic crisis in the U.S. might occur as happened after the OPEC oil embargo of 1973. Finally, the study examines the Congressional response and FERC's reaction to the Midwest price spike, the California electricity crisis, the Northeast blackout of 2003, and the financial decline of electric utilities nationally due to the failures of wholesale electricity market restructuring.

Modern technology driven societies like the U.S. need access to vast supplies of cheap reliable electricity to run everything from computer systems to public sanitation systems. Most of that electricity in the U.S. is provided by private electric utilities. As a result, this study focuses primarily on federal public policies, created by Congress and implemented by FERC, related to private utilities. Yet, despite the importance of electricity to contemporary societies, public affairs scholarship has generally not addressed this issue.

In order to probe the impact of Congress and FERC, I examine interconnected events and actions that take place at different points in time to determine what influence, if any, these organizations have had. Crisis seems to be the primary causal mechanism pushing Congress to act in this area of public policy. Indicators of Congressional action include hearings, proposed federal legislation, and statutes, while indicators of a response from FERC include the issuance of orders, opinions, and formal docketed decisions.

Dedication

To Mom and Dad

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I would like to acknowledge the patience and support I received in the course of completing this project from Dr. Karen Hult, without which I could not have succeeded. Also, I would like to thank Dr. Larkin Dudley, Dr. Anne Khademian, and Dr. Joseph Rees for encouraging me to explore elements of private electric utility regulation in their classes and by providing helpful feedback on this project throughout the entire dissertation process.

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List of Abbreviations

<u>Complete Name</u>	<u>Abbreviation</u>
Administrative Law Judges	ALJs
California Independent System Operators	CAISO
California Public Utility Commission	CPUC
Code of Federal Regulations	CFR
Commerce Clearing House	CCH
Commodity Futures Trading Commission	CFTC
Construction Work in Progress	CWIP
Electric Reliability Organization	ERO
Energy Policy Act of 1992	EPAct 1992
Energy Policy Act of 2005	EPAct 2005
Environmental Protection Agency	EPA
Federal Energy Regulatory Commission	FERC
Federal Power Act	FPA
Federal Power Commission	FPC
Federal Trade Commission	FTC
Independent System Operators	ISOs
Midwest Independent System Operators	MISO
National Environmental Protection Act	NEPA
North American Electric Reliability Council	NERC
Notice of Proposed Rulemaking	NOPR
Open Access Same-Time Information System	OASIS
Organization of Petroleum Exporting Countries	OPEC
Pacific Gas and Electric Company	PG&E
Public Utility Holding Company Act	PUHCA
Public Utility Regulatory Policies Act	PURPA
Regional Transmission Groups	RTGs
Regional Transmission Organizations	RTOs
San Diego Gas and Electric Company	SDG&E
Securities and Exchange Commission	SEC
Southern California Edison Company	SOCAL
Standard Market Design	SMD
State Department of Environmental Quality	DEQ
State Public Utility Commission	PUC
Tennessee Valley Authority	TVA
U.S. Congressional Research Service	CRS
U.S. Department of Energy	DOE
U.S. Energy Information Administration	EIA
U.S. General Accounting Office	GAO
U.S. Office of Technology Assessment	OTA

Chapter 1

Introduction

The U.S. is a country addicted to electricity. Indeed, most of us cannot comprehend living without it. We use it to run everything from our computers to our televisions to our electric toothbrushes and to charge smartphones, tablets, and laptop computers. Our lives are structured by and revolve around the use of electricity. So, if electricity plays such a vital role in our lives, how do we go about regulating it? Unfortunately, the public affairs literature generally has not addressed this question, and when it has, scholars have tended to focus on private electric utility “deregulation.”

This study is designed to examine private electric utility regulation in a more comprehensive way by exploring whether, how, and why the Federal Energy Regulatory Commission (FERC) changed its approach to private electric utility regulation between October 1, 1977 and December 31, 2006 (see Figure 1 in the Appendix). October 1, 1977 is the date when FERC began to operate, and December 31, 2006 marks a little more than one year after the last major piece of federal legislation was passed affecting private electric utilities.

The study focuses on the federal regulation of private electric utilities. Since significant policy changes tend to occur in response to crises like the Great Depression, I decided to focus on federal policy responses to crisis. Moreover, because FERC is an independent regulatory commission and would be expected to be more responsive to Congress than an executive branch agency, the study examines how Congress responded to private electric utility-related crises and to how FERC reacted to legislative actions in such cases. To explain why Congress and FERC behave the way they do both in the absence of and in the presence of a crisis for utilities, I developed a conceptual framework based upon process (Langley, 2009; Pierson, 2000) and punctuated equilibrium (Baumgartner & Jones, 1993) theories, further enriched by concepts like fire-alarm oversight (McCubbins & Schwartz, 1984), hybrid networks (Hult & Walcott, 1990), information asymmetry (Fremeth & Holburn, 2012), operating room politics (Gormley, 1986), and regulatory overlap and underlap (Volner, 1976). Finally, I identified crises by reviewing academic literature looking for events or periods of time described as a “crisis,” often associated

with higher electricity and petroleum prices or electricity blackouts.¹ More generally, sources of key information included academic literature, Commission documents, federal regulations, federal statutes, U.S. Energy Information Administration documents, and congressional documents including those from the legislative agencies.²

One thing becomes immediately clear upon researching the U.S. electric utility industry: the system designed to regulate it has become expansive and complex.³ Generally speaking, most wholesale and interstate activities those companies engage in are regulated at the federal level by the Federal Energy Regulatory Commission, including transmission and wholesale electricity rates (Table 1 in the Appendix; Federal Energy Regulatory Commission, 2010). Moreover, elements of two different regulatory systems exist for regulating private utilities (see Table 1), and states and utilities can choose among some of those elements (Griffin & Puller, 2005; Joskow, 1989, 1997).

The states established the older regulatory system, whose elements are listed in the Older System box found in Table 1, which is predicated on private electric utilities operating as vertically integrated monopolies where each utility has exclusive jurisdiction over a particular area or region (Bradley, 1996; Hirsh, 1999). Within that region the utility generates, transmits, and distributes electricity to its retail customers at rates and under service conditions set and regulated by the state public utility commission (PUC). To increase retail rates or to change retail service conditions, a utility must apply to a state PUC and receive the agency's approval (Bradley, 1996; Hirsh, 1999; Schewe, 2007). If a utility decides to build a new power plant to generate electricity, to put up new transmission lines (usually on large metal towers), or to put up new distribution lines (typically on telephone poles) it must apply to and receive approval from the state PUC before any such facilities can be sited (McGrew, 2009). When a utility decides to

¹ I discussed every crisis that I could find discussion of in scholarly sources. If such sources failed to discuss a crisis, it probably did not receive much attention in Congress either; if it did and I found evidence of it in congressional hearings I reported it.

² The legislative agencies included the Congressional Research Service, the U.S. General Accounting Office, and the Office of Technology Assessment. See chapter 4.

³ Private companies provide most of the electricity in the U.S. and these companies are referred to as investor-owned electric utilities (IOUs) (Kiesling, 2009; Philipson & Willis, 2006), though for reasons that chapter 3 describes Progressives referred to these private companies as “public utilities” (Hirsh, 1999, p. 17; Rothbard, 1977).

purchase electricity from another company, it does so under rates and service conditions established by FERC (Bradley, 1996; Hirsh, 1999; McGrew, 2009). Additionally, FERC regulates the interstate transmission of electricity establishing both rates and service conditions by which all parties must abide (Federal Energy Regulatory Commission, 2007b). If the Commission finds that a company has been overcharged for either transmission service or wholesale electricity it can order a refund (McGrew, 2009; O'Neill, Helman, Hobbs, & Baldick, 2005).⁴

Meanwhile, the newer regulatory system, whose elements are listed in the Newer System box in Table 1 with a * symbol next to them, began to emerge in response to the Northeast blackout of 1965 and continued to evolve following passage of the Public Utility Regulatory Policies Act of 1978 (PURPA; P.L. 95-617; 92 Stat. 3117) and the Energy Policy Acts of 1992 (P.L. 102-486; 106 Stat. 2776) and 2005 (P.L. 109-58; 119 Stat. 594). Beginning with changes made in PURPA this system was designed to slowly break up the monopoly utility structure and to replace it with different companies owning generation (wholesale generators) and transmission (transmission utilities) assets (Kiesling, 2009). When transactions occur between transmission utilities and wholesale generators, FERC regulates the transactions (Joskow, 2005b). It is up to state governments to decide whether they want to select the newer regulatory approach or continue with the older one; if a state opts for change, utilities in the affected state must submit filings to FERC in consultation with and the approval of the state public utility commission (Joskow, 2005b). The Commission must approve the filings, and then market restructuring can begin. Whether wholesale competition in a state will include retail rate schedules, retail rate caps, wholesale rate schedules, or wholesale rate caps is up to the state government, and FERC must approve the wholesale elements of the plan before it can be implemented. FERC reserves the right in this newer system to re-impose wholesale price caps if it finds wholesale prices to be excessive (Joskow, 2001; Wolak, 2005).

States with higher retail electricity rates were more inclined to try wholesale competition under the newer regulatory approach (Andrews, 2000; Ka & Teske, 2002), sometimes mischaracterized as deregulation (Griffin & Puller, 2005, p. 20; McGrew, 2009, p. 250). Market

⁴ This is a broad outline of how private electric utilities are regulated under the regulatory system established through the states and the Federal Power Act of 1935 (P.L. 74-333; 49 Stat. 838). Chapters 3 and 5-7 provide greater detail.

restructuring meant that utilities had to divest either their generation or their transmission assets (Kiesling, 2009).

Since 1968 the reliability of private utilities, measured by the absence of power blackouts and outages, has been regulated by regional non-profit reliability entities, and by another non-profit, the North American Electric Reliability Council (NERC) (North American Electric Reliability Corporation, 2009; 2014). Meanwhile, the Energy Policy Act of 2005 added an Electric Reliability Organization (ERO) to create and enforce mandatory reliability standards on the nation's transmission systems.⁵ The Act gave FERC backstop siting authority for transmission systems in states or parts of states designated by the Secretary of Energy as National Interest Electric Transmission Corridors (see Tables 2 and 3; P.L. 109-58; 119 Stat. 594).

A report by the U.S. General Accounting Office shows where the Commission has regulatory jurisdiction (U.S. General Accounting Office, 2002). Figure 2 shows areas of the country where FERC has regulatory jurisdiction over utilities, while Figure 3 shows the transmission lines subject to the Commission's jurisdiction.

In addition, non-profits known as Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) are designed to manage on a day-to-day basis access to and use of transmission systems in some states (Joskow, 2005b). These entities were created to encourage competition among electric wholesale power generators (see Figure 4). Figure 5 shows the three different electric utility interconnections in the continental U.S. Each interconnection operates largely independently of the others; connecting between the different interconnections can be difficult (Baldick & Niu, 2005). Finally, Figure 6 shows the current status of wholesale electricity market restructuring among the states as of late 2010.

This sort of complexity leads one to wonder how the regulatory system for private electric utilities in the U.S. came to be like this, and focusing on the national level, what role FERC played in those regulatory changes over time.

Organization of the Dissertation

Chapter 2 reviews scholarly literature both in public affairs and beyond that discusses how and why the regulatory system for private electric utilities has changed and become what it is in spring 2014. Chapter 3 takes the reader through the history of private electric utility

⁵ NERC ultimately was named the ERO (Federal Energy Regulatory Commission, 2014).

regulation, paying particular attention to important changes made through presidential, congressional, and judicial actions. It also briefly explains why wholesale market restructuring is not really deregulation, and it is careful to note partisan political changes following elections to reveal the extent to which regulation changes because of election results over time. Next, Chapter 4 introduces the conceptual framework designed to explain how and why regulatory changes occurred for utilities, and it presents the study's research design. Chapters 5 through 7 report the empirical findings, organized by the crises that catalyzed congressional responses and shaped FERC's activities. Finally, Chapter 8 concludes the discussion.

Chapter 2

Review of Scholarly Literature

Scholars have sought to explain various elements of electric utility regulation and the associated performance of private electric utilities. Some of the work was useful in developing the broader conceptual framework (see chapter 4) I used to explore how and why electric utility regulation has changed over time, informed by chapter 3's historical review of regulatory changes. It is crucial first, though, to place this study in the context of previous scholarship.

This chapter explores general questions related to private electric utility regulation after October 1, 1977 and the creation of the Federal Energy Regulatory Commission. It also will acknowledge important scholarship on the relationship between Congress and the independent regulatory commissions, on regulatory capture, and on how Congress and the federal commissions respond to crisis. The discussion will highlight the gaps that exist in public affairs scholarship and show how this study sought to address those gaps. Other streams of literature from economics, law, engineering, and history will be examined to provide additional insights into the regulation of private electric utilities.

Public Affairs Literature

Research dealing with electric utilities largely comes from scholars with public policy backgrounds (Andrews, 2000; Axelrod, 1982; Garvey, 1993; Gormley, 1983, 1986; Ka & Teske, 2002; Kincaid, 2001; Riposa, 1988; Timney, 2004). For the purposes of highlighting the gaps in existing public administration/policy scholarship, it is important to understand the various topics examined including regulatory overlap, regulatory underlap, agency capture, the structure and operation of independent regulatory commissions, difficulties associated with regulating private electric utilities, and specific state-level influences.

Regulatory Overlap

Regina Axelrod (1982) found that when governments face ambiguities and conflicting values, they tend to engage in incremental decision making, and they tolerate conflicting objectives by agencies with overlapping jurisdictions (p. 176). Because Congress often provides similar jurisdiction to more than one independent federal regulatory commission, overlapping regulatory jurisdictions are common at the federal level (Volner, 1976, p. 293).

For private electric utilities overlapping regulatory jurisdictions occur not only among federal independent regulatory commissions but also among federal executive branch agencies

and state commissions. Overlap can be both beneficial and produce problems (Lewis, 2003; Volner, 1976). The benefits of overlap are in part constitutional and inevitable under the U.S. system of government, a system designed to limit the power of government, not to make the implementation of policy easy. To that end, the overlap extends a system of checks and balances and federalism to the regulation of private electric utilities, allowing different federal and state actors to influence regulatory outcomes and in some cases serve as checks on the regulatory power of the other actors involved in the regulatory process.⁶ The overlap can be problematic, however, when it encourages different regulatory actors to adopt different regulatory standards that over time may be detrimental to the public interest (Volner, 1976, p. 294). These differing and sometimes conflicting standards may be influenced by competing missions or objectives of varying regulatory actors (Axelrod, 1982; Lewis, 2003). Additionally, difficulties can arise when the overlap results in one of the federal agencies declining to enforce unambiguous regulatory standards Congress created when another has regulatory jurisdiction in the same issue area, undermining the potential for regulatory checks and balances (Volner, 1976, pp. 294-295).

Regulatory Underlap

Another problem arises for both federal executive agencies and independent regulatory commissions when Congress provides vague or blurry regulatory boundaries, resulting in regulatory underlap, when it is unclear where the jurisdiction of one agency ends and where it begins for another (Volner, 1976, p. 295). Lewis (2003) found that “underlap” was most likely when an agency was created in response to political concerns⁷ (p. 8). Regulatory underlap like regulatory overlap provides a positive benefit: nebulous legislative language can serve as the basis for much needed debate over the proper scope and role of government in the regulation of private electric utilities. Such arguments could result in the protection of individual rights by promoting regulatory inertia, especially in controversial cases, as the federal agencies and

⁶ Congress made this linkage even more explicit for the Federal Energy Regulatory Commission in the Department of Energy Organization Act (Public Law No. 95-91; 91 Stat. 565) of 1977 as it gave the Secretary of Energy oversight and influence over the operations of FERC. Essentially what this legislation did, in Lewis’s (2003) terms, was to lessen political insulation and to increase accountability to the president for how well FERC performed even though the Commission was supposed to be an independent regulatory commission. (See chapter 3 for details.)

⁷ Such concerns may include institutional, partisan, and ideological considerations.

commissions involved simply may not agree on how to regulate. To a significant extent these arguments reflect the dual role government agencies and commissions play in the United States. These entities perform a regulatory function, and they often represent the interests they regulate in government debates over how those interests should be regulated.⁸ Meanwhile, difficulties arise with regulatory underlap because an agency or commission may be unsure how it should respond to an unclear regulatory gap; coordination among regulatory actors under such circumstances may well be impossible (Volner, 1976, pp. 297-298).

Agency Capture

When the issue of agency capture appears in the private electric utility regulatory context, it typically means that private utilities actually control the agencies and the regulatory process (Berry, 1984, p. 524). As a result, the utilities are able to ensure that regulatory policy and decisions reflect what they want. As Bradley (1996) and Hirsh (1999) note, the regulated entities themselves, not the public at large, wanted state regulation, as the industry understood such regulation would directly benefit it. Yet, much has changed in the regulation of utilities since states began regulating them in the early 1900s.

Berry (1984) and Garvey (1993)⁹ are among those skeptical of capture theory, particularly as it relates to the private electric utility industry. Berry (1984) points out that studies (Croley, 2011; Ka & Teske, 2002; Meier, 1988) have found that regulatory capture does not occur as often as once thought, since regulators must consider a complex set of regulatory factors whenever they make a decision, including the possibility of facing judicial or legislative actions if they favor regulated interests too strongly over other considerations.

Moreover, studies comparing regulatory outcomes for private electric utilities among states found that contrary to the predictions of capture theory, states with more professional state public utility commissions tended to have higher electricity rates (Berry, 1984; Ka & Teske,

⁸ It is this second role that some (Bradley, 1996; Hirsh, 1999) arguably have mischaracterized as “agency capture.” I discuss this briefly below.

⁹ Gerald Garvey (1993) examined the Federal Energy Regulatory Commission (FERC) during the Reagan administration, highlighting the internal conflict that seriously affected the Agency. More generally, Daniel Carpenter and David A. Moss express concern that capture frequently is “misdiagnosed” or “mistreated” (2014, p. 3). See Carpenter and Moss, “Introduction,” in *Preventing Regulatory Capture: Special Interest Influence and How to Limit It*, eds. Carpenter & Moss (New York: Cambridge University Press, 2014).

2002). One would expect to find states with less professional commissions would have higher rates because they would be more likely to be captured and thus have higher rates to suit the private utilities.

Finally, agency capture at the federal level seems to be at least to some degree pointless because Congress has established a regulatory system, by design or happenstance, that contains overlapping regulatory jurisdictions with many different interests (including environmental, consumer, and utility industry) with different objectives (Axelrod, 1982; Gormley, 1983; Volner, 1976). These overlapping jurisdictions and multiple interests make agency capture unlikely: it would require utilities to capture most of the pertinent federal, state, and local entities and likely most of the other interests involved to guarantee desired policies.¹⁰

Commission Structure and Operation

It is also important to recognize that commissions differ from executive agencies in several important ways that affect how the former operate. First, Congress has structured most federal commissions so that they are run by boards of five commissioners (e.g., the Nuclear Regulatory Commission, the Federal Communications Commission, FERC) who vote on major policy choices (McCubbins, 1985, p. 727). Next, Congress generally extends broad delegations of power to the federal commissions, including the ability provided first to the FPC and later to FERC to determine “just and reasonable” wholesale electricity rates (Volner, 1976, p. 291). Congress may have recognized that such broad delegations of power needed to be checked in some way, which may explain why it has established overlapping regulatory jurisdictions for the commissions to navigate.¹¹ Furthermore, if it is dissatisfied with the regulatory behavior of a commission Congress will impose additional procedural restrictions and seek to cut a commission’s substantive discretion¹² (McCubbins, 1985, p. 745).

¹⁰ As Meier (1988) found with the insurance industry, too many interests and regulators are involved with different policy goals on issues related to private electric utility regulation for agency capture to occur. See too Carpenter and Moss (2014).

¹¹ In the past Congress attempted to check the power of commissions through the use of the legislative veto (McCubbins, 1985). Although the U.S. Supreme Court declared the legislative veto unconstitutional in *Immigration and Naturalization Service (INS) v. Chadha* (462 U.S. 919 (1983)), Congress still places the legislative veto in legislation.

¹² Such behavior may well include shirking in response to congressional policy decisions or federal court decisions (Landis, 1960; McCubbins, 1985).

In exercising delegated powers, the commissions operate outside of the top down flow of presidential authority, and as a result Congress tends to have more influence over commissions than it does over executive branch agencies (McCubbins, 1985; Rohr, 1986). Presidents, however, still wield some influence over commissions through the power to appoint commissioners¹³ and other high-ranking officials. As mentioned earlier, in some circumstances as with FERC, Congress has granted executive branch officials the ability to exercise oversight over commission actions and operations. Although congressional influence tends to be greater, with the commissions creating more opportunity for members of Congress to claim credit when things work out well, commissions also open Congress to at least some of the blame when things go wrong (McCubbins, 1985, p. 734; Volner, 1976).

Members of Congress may well have responded to the potential for blame for failures occurring at commissions through developing regulatory overlap and underlap and by providing for executive branch oversight of the commissions in some cases, creating a long list of potential scapegoats.¹⁴ The issue of assigning blame for the failures of the federal independent regulatory commissions became particularly pertinent in the mid-1970s as public demands increased for major reforms including the complete abolition of all federal commissions (Volner, 1976, p. 285).

Problems and Difficulties of Regulating Electric Utilities

Beyond these regulatory jurisdictional matters, other public affairs scholarship focused more specifically on some of the other difficulties of regulating private electric utilities. William T. Gormley, Jr. (1983) attributed some of the problems in regulating utilities to the nation's dependence on foreign oil, the need to choose what policies deserve attention, and technological stagnation (pp. 7-8). He also reported that the regulatory system designed to govern private

¹³ Commissioners must be confirmed by the U.S. Senate.

¹⁴ Overlap, underlap, and executive branch oversight serve the dual role of checking the power of the commissions and providing members of Congress cover when things go wrong. According to McCubbins and Schwartz (1984), when Congress designs and engages in oversight it seeks to maximize its ability to claim credit when things go right and to insulate itself from blame when things go wrong; this behavior likely also applies to congressional oversight over commissions. It is important to acknowledge that because Congress performs much of its oversight through its committee and subcommittee systems, some members are far more engaged and important in the oversight process than others.

utilities was both highly fragmented and complex; the number of actors that had a say in how private utilities were governed had risen exponentially. This may suggest that Congress and some state legislatures were concerned about the expanding discretionary powers of some federal and state regulatory commissions or the growing influence of certain powerful interests. In response, Congress and some state legislatures began to allow even more actors to have influence over the regulatory system. Legislators also may have sought additional political cover as regulatory failures became more commonplace (Bradley, 1996; Volner, 1976). Even so, at least some of the fragmentation and complexity in the regulatory system were products of how each state government chose to organize its system of oversight.

In a later article Gormley (1986) categorized private electric utility regulation as being highly salient because electricity is a necessity, producing broad, highly intense conflict among a plethora of actors with different views about how best to regulate the industry (pp. 598-601). Private electric utility regulation is highly complex, requiring specialized training and knowledge (p. 598). Gormley writes that elected officials respond to highly salient and highly complex issue areas either by proposing legislation that has no chance of adoption or by passing procedural bills to scatter authority (p. 603).¹⁵ In this environment, “operating room politics” occurs, resulting in the formation of citizen groups, public protests and lawsuits, and frequently inaccurate reporting by the media, with actual attempts to solve the problems left to upper-level bureaucrats at agencies like FERC and state PUCs that face second guessing and blame if things go wrong (Gormley, 1986, pp. 611-615). Congress may well have encouraged this type of policy environment with its penchant for “fire-alarm oversight” (McCubbins & Schwartz, 1984, p. 166).

Specific State Level Regulatory Influences

A number of other works add relevant findings as they more directly examine state-level influences on regulatory outcomes. Gerry Riposa (1988) found that intergovernmental relationships are important when regulatory authority is scattered over different levels of government, as it clearly is for electric utilities with wholesale activities regulated by FERC and retail activities regulated by the states. After the passage of the Energy Policy Act of 1992 (P.L.

¹⁵ This is consistent with Volner’s (1976) finding that although Congress frequently investigated the regulatory commissions, it rarely adopted any substantive legislation changing how the commissions operated.

102-486; 106 Stat. 2776) Congress and FERC left it up to state elected officials to decide whether each state would participate in what has been described alternatively as deregulation, managed competition, or wholesale competition. Moreover, states that opted for wholesale competition went through a process that scholars have called market restructuring, moving from the regulatory approach that developed during the New Deal to a new regulatory arrangement designed to allow for and to promote competition among wholesale electricity generators.¹⁶

Some public affairs scholars looked specifically at why some states chose to restructure and others opted not to. Clinton Andrews (2000) found that high electricity prices rather than partisan control of state government was a significant predictor of a state moving toward managed competition (p. 26). In a related study, Sangjoon Ka and Paul Teske (2002) reported regression results indicating that the composite ideology scores of state legislatures failed to predict whether a state would choose managed competition (p. 333).

As troubles began to surface for wholesale competition, some scholars began to explore the impact the difficulties had on federal-state relationships and on the push for wholesale competition generally. John Kincaid (2001) summarized how national efforts to encourage such competition resulted in a contentious relationship between the state and the federal governments and in growing state opposition to wholesale competition. This conflict also seemed to animate scholars like Mary Timney (2004) to insist that the push for wholesale competition was driven by conservative ideology and to call for a return to the pre-existing regulatory regime (p. 143). Ironically, Jerry Taylor (1997), a scholar of energy policy at the CATO Institute, also indicated his preference for the older regime because he opposed the creation of artificial markets.

Scholarship beyond Public Affairs

Each of these works provides ideas and arguments that the study explores. Unfortunately, most of the public affairs scholarship was produced before all of the crises involving electricity occurred, and none directly examines the question at the heart of this study.

¹⁶ The federal government has pushed for managed competition, arguing it will improve both reliability and lower electricity rates. (Reliability exists when there is an absence of large cascading power failures.) Following Moe (1989) and Lewis (2003), I believe the choice by Congress to encourage electricity market restructuring over time has been a political, not a technical choice. As a result, managed competition actually may be technically less effective than the existing utility structure, but may produce greater political benefits for members of Congress.

It does not explore the changes FERC made in its regulatory approach toward private electric utilities through 2006 in response to Congress's efforts to address utility-related crises.

In order to address the deficiencies of public affairs scholarship, I also grounded this study in work from economics, engineering, history, and law. Such scholarship is in some ways more useful because it more directly takes on the focal question here. Perhaps not surprisingly, these fields tend to tilt toward an emphasis on energy or on the environment.¹⁷ The works considered here are not exhaustive, but instead, they provide a sample of useful literature outside of public affairs.

Energy Economists

Paul Joskow has produced much of the important scholarship on the private electric utility industry. His work systematically describes nearly every element of the electric utility industry over each decade of its existence; few other scholars have been as attentive to the changes in the industry over time. For example, Joskow co-authored a paper with Paul MacAvoy (1975) examining the financial condition of the electric utility industry. They found that utilities were constrained financially by stagflation, rising fuel prices, the resistance of state governments to raise retail rates sufficiently to keep up with inflation, and declining stock values; moreover, utility bonds were not considered good investments at the time. Joskow and MacAvoy concluded that if something were not done to make it easier for utilities to gain access to capital, many eventually would have serious financial problems.

Joskow (2001) later examined the economic and regulatory factors leading to the California electricity crisis. He concluded that the crisis was precipitated by the structure of the state's reform efforts, and it was exacerbated by poor responses by a number of government actors including FERC and by several uncontrollable factors (e.g., hot temperatures). In 2005

¹⁷ Energy economists (Bradley, 1996; Bushnell, 2005; Joskow, 2005b; Wolak, 2005; Wolfram, 2005) and electrical engineers (Hamoud, 2000; Leevongwat, Rastgoufard, & Kaminsky, 2008; Lin, Jordan, Sanford, Zhu, & Babcock, 2006; Nakashima & Niimura, 2002) tend to focus on energy-related questions; energy history scholars (Hirsh, 1999; Nye, 2010; Schewe, 2007) frequently emphasize environmental questions related to electric utilities; and energy law scholars (McGrew, 2009; Melnyk & Lamb, 2006; Reiter, 2008) sometimes examine energy, sometimes environmental, and sometimes both energy and environmental questions.

Joskow (2005a, 2005b) discussed market restructuring, generally describing some of the problems and the potential benefits of moving to wholesale competition for electricity.¹⁸

Robert Bradley, Jr. (1996) argued that private electric utility regulation resulted from business and political opportunism,¹⁹ not market failure. He makes a compelling case that may explain why utility regulation tends to favor some interests at the expense of others, as this form of regulation is generally affected by political and business interests and not the average citizen or consumer.²⁰

Meanwhile, James Bushnell (2005) contends that private electric utilities have outgrown many of the statutes, rules, regulations, and orders used to govern them, including federal efforts to impose managed competition nationally. In his view, FERC is constrained in its efforts to create wholesale electricity markets by overlapping regulatory jurisdictions, with states forcing the Agency to broaden the guidelines for such markets, making failures like the California crisis more likely. He asserts that the establishment of wholesale electricity markets if done correctly could produce substantial benefits. Major failures like California could be avoided if FERC had clear jurisdiction to establish such markets, and the Agency focused on changing the structure of the industry rather than on price.

Other noteworthy examples of scholarship by energy economists include a paper written by Frank Wolak (2005) examining the causes of the California electricity crisis. He contends

¹⁸ This material represents just a sample of Joskow's work. A review of his website (Joskow, 2011) and curriculum vitae reveals a voluminous number of articles and books along with congressional testimony. He also serves as a member of numerous boards and several associations related to the utility industry.

¹⁹ Bradley (1996) argues that although state regulation was advanced as a way to protect consumers, it did nothing of the sort. Instead, in his view, state regulation caused many of the excesses and problems that required a federal response in the Federal Power Act of 1935 (Public Law 74-333; 49 Stat. 838-863). See Chapter 3 for more details.

²⁰ This argument is consistent with Moe (1989) and Lewis (2003), who contend that agency design is the product of institutional, partisan, and ideological politics rather than any grand plan or vision for how best or whether to regulate a particular industry. When politics come into play, it necessarily means some interests will have more of a say over how an agency should be structured, which in turn will affect how the agency once established chooses to regulate a particular industry. In FERC's case this likely meant that political and business interests had some say over how it was structured when it was created, influencing how the Agency goes about regulating the electric utility industry.

that the crisis was regulatory and not economic,²¹ and FERC's regulatory response made it significantly worse. Wolak concludes by prescribing that FERC take a more proactive regulatory approach toward wholesale electricity markets to prevent or at least mitigate similar crises.²²

Finally, Catherine Wolfram (2005) examines the potential efficiencies to be gained from market restructuring, if it is done correctly. She lays out a framework that could be used to develop more efficient electricity generation in a wholesale competition market environment.

In sum, if one considers the points made by Bushnell, Wolak, and Wolfram collectively, managed competition might work depending on how it is designed and regulated. However, political constraints due to technical complexity and regulatory fragmentation may make the successful adoption and implementation of wholesale competition almost impossible.

Electrical Engineers

Meanwhile, research by electrical engineers (Hamoud, 2000; Leevongwat et al., 2008; Lin et al., 2006; Nakashima & Niimura, 2002) examines elements of managed competition to see if it actually would work. For example, Goma Hamoud (2000) examined the feasibility of a large number of transmission transactions taking place at the same time, a requirement of an electric utility industry operating under wholesale competition. He concludes by suggesting that his assessment method could be used by independent system operators (ISOs) to determine the feasibility of multiple transmission transactions ahead of time, which would allow system operators to schedule how and when such transactions occur. Tomoaki Nakashima and Tak Niimura (2002) reviewed the organizational structures of such ISOs. Their findings highlight

²¹ Below, I label this as both a regulatory and a constituency crisis because it affected both regulatory actors and the public at large.

²² Wolak criticizes FERC for being reactive rather than proactive much like the FPC was criticized when regulating the natural gas industry. (See chapter 3.) The independent regulatory commission design, which tends to mirror to some degree small legislatures, may promote a more reactive approach, much as Congress tends to prefer a more reactive approach to oversight through fire-alarm oversight (McCubbins & Schwartz, 1984; Volner, 1976). Congress also has encouraged the development of non-profit regulators (independent system operators, regional transmission organizations, regional reliability systems, and an electric reliability organization) to serve as "fire-alarms" for FERC, allowing the Agency to act as a reactive regulatory backstop in some cases.

which ISO structure produces the most efficiency and which provides the most protection against market manipulation.

Lin et al. (2006) compared the economic benefits and costs of regional transmission organizations (RTOs) and standard market design (SMD)²³ in a region to the benefits and costs of operating in the region without the RTOs and the SMD. Their results were unclear about whether the economic benefits of RTOs and the SMD outweighed the economic costs of not having them. Finally, Leevongwat et al. (2008) examine the status of electricity market restructuring in the United States and whether the use of a particular pricing approach, locational marginal pricing,²⁴ led to more competition and lower rates. The authors found that LMP reflected the actual cost of electricity under a managed competition system.

Taken together, the studies by electrical engineers show that multiple electricity transmission transactions at the same time are possible if managed correctly, and the structure of ISOs determines their ability to produce efficiently and to protect consumers against market manipulation. Meanwhile, RTOs and a standard market design do not seem to produce economic benefits, and the pricing approach in managed competition has limited effects.

Such works provide some clues about whether managed competition will work technically. This is important because if managed competition will not actually work, FERC probably would be blamed and potentially punished by Congress. Results from these and similar studies suggest that managed competition is feasible but does not seem to guarantee the promised lower rates, increased competition, or improved reliability. What this utility structure does do, however, is add to the number of actors involved in the delivery of electric service (e.g., small power producers and cogenerators) and its regulation (e.g., independent system operators, regional transmission organizations, regional reliability entities, and the electric reliability organization), providing more targets for Congress and consumers to blame if things go wrong.

²³ The standard market design (SMD) if FERC had implemented it would have established a mandatory framework for all of the states to follow in the development of managed competition. FERC abandoned SMD due to intense state opposition to managed competition, particularly after the California electricity crisis (Joskow, 2005a).

²⁴ LMP occurs when energy supply is determined based upon the lowest possible bid at any location (Leevongwat et al., 2008). Different pricing schemes might lead to very different results in a utility industry operating under wholesale competition.

Historians

Scholarship by historians on the electric grid and on changes to electric utility regulation also was quite useful for this study. Richard Hirsh (1999), for example, examines the history of electric utilities and changes to utility regulation that eventually resulted in market restructuring. Although I disagree with both his analysis of what occurred and his policy prescriptions for solving problems with the electric grid,²⁵ he provides an historical record that can be compared against other such records to mitigate possible problems of selection bias in my analysis (Lustick, 1996).²⁶

In addition, David Nye (2010) examines the history of power blackouts in the United States. His work is important here because large, prolonged cascading power failures seem to have served as one type of crisis that drove Congress to act (see chapters 3, 4, and 5). In his work, Phillip Schewe (2007) provides both an historical review of electric utilities and their regulation and a description of how electric utilities operate. Here, Schewe's scholarship helped confirm historical points other scholars made, and it is useful in understanding how the electric grid system works.

Energy Law

Scholarship in energy law directs attention to key legal features and dynamics of electric utility regulation. James McGrew (2009) wrote what is considered to be the legal handbook on FERC's legal and regulatory powers over the electric, natural gas, hydroelectric, and oil pipeline industries.²⁷ The work carefully highlights important federal court cases; FERC regulations in the Code of Federal Regulations (CFR); sections of the Federal Power Act relevant to FERC opinions, orders, proceedings, and rules of practice and procedure; and sections of the Interstate Commerce, Natural Gas, and Natural Gas Policy acts relevant to FERC. I relied on this book to double check and verify the legal information presented throughout this study.

²⁵ See chapter 3.

²⁶ To minimize such problems, I have used historical records provided by many of the authors cited and reported historical points on which the authors agree.

²⁷ In fact, U.S. Supreme Court opinions have cited material from this book in explaining rulings (McGrew, 2009, p. viii).

Additional useful legal scholarship includes a work in which Markian Melnyk and William Lamb (2006) explored the repeal of the Public Utility Holding Corporation Act (PUHCA) of 1935, concluding that the law needed to be repealed. Like Bushnell (2005), they argued that the utility industry had evolved beyond the regulatory structure designed to govern it. Melnyk and Lamb contend that FERC must encourage utilities to insulate themselves from the financial difficulties of holding companies, and the Agency must be proactive in preventing abuses by holding companies that might result in financial problems for the industry.

Finally, Harvey Reiter (2008) challenges FERC's financial regulation of wholesale competition, arguing that its approach could lead potentially to serious financial problems for utilities. He raises a larger point about the wisdom of relying on FERC to regulate the financial elements of the utility industry.

Summary

Overall, the literature this chapter has examined helps explain how and why legislatures behave the way they do toward the private electric utility industry in the United States. This behavior manifests itself in the ways state legislatures and Congress design structures to regulate utilities. Major factors that influence the behavior of legislatures toward the private electric utility industry include technical complexity, the contentiousness of the policy environment, and existing regulatory fragmentation. Another factor includes political considerations informed by ideological, institutional, partisan, and regional concerns. How legislatures have chosen to navigate these different factors has had a direct impact on the regulatory structures designed to regulate utilities and have affected how agencies can regulate the electric industry. Clearly, Congress has shaped and constrained the Federal Energy Regulatory Commission. The following chapter will summarize the history of electric utility regulation in the United States, providing additional context for congressional behavior and FERC's responses, during eras both of relative calm and in the aftermath of a crisis.

Chapter 3

History of Electric Utility Regulation

Congressional behavior influenced the design of the Federal Energy Regulatory Commission, affecting how the Agency can regulate electric utilities. Most of the scholarship chapter 2 examined, however, focuses on snapshots in time; in other cases it is not comprehensive enough to reveal what may have occurred over a longer time period that influenced changes in behavior. Events and actions rarely occur out of nowhere; instead, they are usually the product of longer and more complicated historical dynamics.

This study focuses on how and why FERC changed its approach toward private electric utilities between October 1, 1977, and December 31, 2006. Because it is a process explanation study (see chapter 4), a well-developed historical context is important as differences and similarities unfold and are compared over time. To better understand the changes in FERC's approach, it is useful to know the regulatory powers the Agency inherited, why those powers were established, and how and why they were changed by federal legislation, executive orders, and Supreme Court decisions. This chapter describes the influence of Congress, the presidency, and the Supreme Court on the Agency's regulatory powers over time. The influence of private electric utility activity will be mentioned when it is appropriate. The chapter begins with a brief review of the pre-FERC period, running roughly from 1880 through September 30, 1977. This is followed by a more in-depth review of federal government activity after FERC began operating on October 1, 1977.

Regulatory Eras

Private electric utility governance in the U.S. generally has gone through four distinct eras: (1) an early unregulated history, marked by little regulation, (2) state regulation, (3) federal and state regulation, and (4) federal, state, and non-profit regulation. Most states went through these eras. However, some chose not to regulate private electric utilities until well into the 1960s²⁸ (Bradley, 1996; Stigler & Friedland, 1962), skipping the second era entirely; those states wound up having federal regulation before state regulation.

Regulation before FERC

²⁸ These states included Iowa, Minnesota, Nebraska, South Dakota, and Texas (Stigler & Friedland, 1962). Nebraska is a special case because most of its utilities are cooperatives and are not privately owned.

The First Era: 1880 – 1907

The industrial revolution brought a series of unprecedented changes in American life, including the need for an efficient energy source to power its growing urban industrial centers (Hirsh, 1999; Schewe, 2007; Skowronek, 1982). Between 1880 and 1890 electricity became a viable energy alternative with the creation of the light bulb and the subsequent establishment of electric service in cities throughout the country (Bradley, 1996; Hirsh, 1999; Schewe, 2007).²⁹ It became even more practical as an energy source with the invention of alternating current (AC) systems that could generate, transmit, and distribute electricity over vast geographic areas (Hirsh, 1999, pp. 12-13; Schewe, 2007, p. 40).

Urban industrial demand drove rapid growth in the electric utility industry. Electric utilities responded by creating entities designed to self-regulate the industry. In the 1880s “a committee of the Institute of Electrical Engineers” issued standards for electrical equipment to “improve quality” and “lower costs” (Bradley, 1996, p. 61). The industry also formed other organizations such as the National Electric Light Association (NELA) and the Association of Edison Illuminating Companies, while the National Board of Fire Underwriters assisted in the development of safety procedures (p. 61). The object was to encourage the different utilities to work together to ensure the viability of electricity as an energy source and to avoid the problems found, for instance, in the railroad industry where different company standards made railroad travel exceedingly difficult because of different gauge tracks. The electric industry also established market conservation programs through rate incentives to consumers and “encouraged incremental consumption” through “quantity discounts”³⁰ (p. 61).

Massachusetts became the first state to regulate electric utilities in 1887; however, the state limited its regulatory authority to cases of complaints that could then be investigated (Bradley, 1996, p. 65; Stigler & Friedland, 1962, p. 13). In the meantime, some utility executives began a public push for the state regulation of electric utilities as a bulwark against excessive competition and over concerns that municipalities would ultimately take over the utilities (Bradley, 1996, p. 62; Hirsh, 1999, p. 23). The executives wanted state government legalization of private electric utility monopolies. In return the states could regulate the utilities

²⁹ Sources disagree over the exact dates; instead I have provided a date range within which the different dates provided by various sources fall.

³⁰ Quantity discounts occur when each additional unit costs less than the first unit.

through what the utility officials described as “impartial” regulation. These executives clearly understood that state regulation would be designed to benefit them at the expense of would-be competitors and municipalities that would be limited in their ability to take over utilities.

Eventually, the utilities were able to convince most states to regulate electric utilities, arguing that the industry would be more efficient and consumers would benefit if it were run on a monopoly basis with retail rates regulated by the states (Bradley, 1996, pp. 68-69). Industry advocates couched their arguments in the language of natural monopolies, an idea developed by professors like Richard Ely and Henry Carter Adams; this perspective saw large uncompetitive firms regulated by the states as producing better outcomes for society in the delivery of electricity than competitive businesses could³¹ (Bradley, 1996, pp. 68-69; Hirsh, 1999, p. 18).

Meanwhile, the U.S. Supreme Court cleared the way for state regulation of electric utilities in *Munn v. Illinois* [94 U.S. 113 (1877)]. The Court ruled that certain businesses were so central to American society that they were “affected with a public interest” and essentially were monopolies that could fix prices. At the time, electricity was clearly viewed as vital to American society, so much so that the entire industry was classified like services such as water, sewer, and natural gas as a “public utility” even though private companies often provided many of the services (Hirsh, 1999, p. 17; Rothbard, 1977). Implicitly, *Munn* allowed for the state regulation of private electric utilities under three conditions: (1) private electric utilities operated in a state where they had been granted monopoly status; (2) the utilities operated solely within the boundaries of one state; and (3) electricity was viewed as vital.³² In states where all three conditions were met, *Munn* could be used as a legal justification for state regulation of private electric utilities, including the establishment of retail rate schedules. Later, in *Smith v. Ames* [169 U.S. 466 (1898)] the Supreme Court upheld the right of the states to regulate the prices

³¹ The concept of a natural monopoly became highly controversial in academic circles as scholars in the Chicago and Austrian schools of economics challenged it (Behling, 1938; Bradley, 1996; Demsetz, 1968; DiLorenzo, 1996). Studies by these economists found that utilities were competitive before state regulation, and state regulation did not improve retail prices for consumers (Behling, 1938; Bradley, 1996; Demsetz, 1968; DiLorenzo, 1996; Stigler & Friedland, 1962).

³² The third condition had already been met for electricity in all states at the time as evidenced by its designation as a “public utility.”

charged to consumers by a business “affected with a public interest” (U.S. Energy Information Administration, 1996, pp. 30-31).

In 1905 New York became the second state to establish a utility commission to regulate electricity, but it had few rate setting powers, which a state court decision further constrained (Anderson, 1980; Bradley, 1996). In both Massachusetts and New York regulation occurred through commissions rather than through direct regulation by state legislatures, though both state commissions had few if any rate setting powers (Bradley, 1996, p. 65; Ruggles, 1937, p. 6).

Over the next several decades elected Progressive leaders continued to push to create state regulation of private electric utilities. Their efforts led to the second era of electric utility regulation.

The Second Era: 1907-1935

By 1907 some state legislatures and governors decided they needed to do something further to regulate private electric utilities. New York passed new legislation reorganizing the state’s utility commission and creating a separate commission for New York City after an investigation by Charles Evans Hughes found that price gouging had occurred in New York City due to a relationship between Tammany Hall politicians and private utilities (Anderson, 1980). The resulting commissions had members whom the governor appointed, and the governor had the power to remove members to get around corrupt government officials in New York City (Anderson, 1980). The law gave the commissions “the power to approve utilities’ issuance of stock and bond securities, the right to investigate companies’ accounting books, and the authority to establish maximum rates,” and it limited the jurisdiction of the state courts to cases questioning whether the commissions had “exceeded their statutory powers” (Hirsh, 1999, p. 21).

New York’s move to establish a state public utility commission with the power to regulate the rates of private electric utilities seemed to open the flood gates for other states to do the same. By 1934 around 40³³ states had created commissions with jurisdiction over the private electric utility industry. Yet, the commissions varied greatly, with some having significantly

³³ This number varies by source.

more regulatory jurisdiction and powers than others (Abel, 1999; Gormley, 1983; Stigler & Friedland, 1962).³⁴

Opening the Door to Federal Regulation. Full-throated federal regulation of private electric utilities would not begin until 1935. However, the federal government took a big step toward such regulation with the passage of the Federal Water Power Act of 1920 (P.L. 66-280; 41 Stat. 1063). The statute created the Federal Power Commission (FPC)³⁵ as an executive branch agency to regulate hydroelectric and navigable waterway projects. Under the law those wishing to own, maintain, operate, or build a hydroelectric or navigable waterway project³⁶ had to get a license from the FPC. Getting and keeping a license meant following the rules, practices, and procedures established by the Commission. Violations could result in fines, and if the violations were bad enough they could result in license revocation and the loss of control over the affected project (P.L. 66-280; 41 Stat. 1063-1077).

Utility Industry Consolidation. Between 1920 and 1935 the private electric utility industry went through an era defined by consolidation³⁷ and growth (U.S. Energy Information Administration, 2000; Abel, 1999; Bradley, 1996; Hirsh, 1999). From 1917 to 1930 the number of companies creating electricity declined from around 4,300 to around 1,600, with nearly 200 utility consolidations per year,³⁸ while the number of residential consumers grew from six to twenty

³⁴ As mentioned earlier, state regulation seemed to benefit private utilities the most. For example, in 1915 state commissions approved close to 90% of private utilities retail rate increases (Bradley, 1996, p. 66).

³⁵ The Federal Power Commission is important as a predecessor of the Federal Energy Regulatory Commission; FERC inherited much of its authority from the FPC. Initially, the FPC was composed of three commissioners: the Secretaries of War, Interior, and Agriculture (P.L. 66-280; 41 Stat. 1063).

³⁶ Hydroelectric and navigable waterway projects and equipment subject to FPC regulation included locks, dams, water conduits, reservoirs, power houses, and transmission lines (P.L. 66-280; 41 Stat. 1063-1077). Here the regulation of transmission lines was limited to lines running from a water project.

³⁷ Whether the consolidation occurred as a result of state regulation is part of the debate over the natural monopoly concept.

³⁸ According to Abel (1999), between 1900 and 1920 the number of private electric utility systems grew from around 2,800 to around 6,500, but that number declined sharply, starting in 1920 (p. 2).

million (Ray, Stevenson, Schiffman, & Thompson, 1992, p. 4). In 1921 private utilities provided 94 percent of the total electricity generated (U.S. Energy Information Administration, 2000, p. 5). Although the federal government still focused on regulating waterway projects, in 1923 additional signs appeared of the growing dominance of private electric utilities as nearly a third of municipal utilities purchased their electricity from private utilities, an increase of around ten percent since 1909 (Bradley, 1996, p. 67). Municipal utilities that purchased their electricity limited their activities to transmission and distribution.

Private electric utility dominance began to express itself in this second era with the formation of public utility holding companies, companies that “directly or indirectly own, control, or hold ten percent or more of the voting securities of a public utility company” (e.g., American Electric Power is a holding company; P.L. 74-333; 49 Stat. 806; § 2). The creation of holding companies resulted in a situation in which a handful of companies controlled most of the electric service provided in the United States. By the late 1920s 16 holding companies controlled more than three-quarters of all electricity generated in the country (U.S. Energy Information Administration, 2000, p. 5; Melnyk & Lamb, 2006, p. 3).

Furthermore, states could not effectively regulate holding companies because the companies engaged in interstate commerce including long distance electricity transmission across state lines. The U.S. Supreme Court denied the states jurisdiction over interstate transmission cases in *Rhode Island PUC v. Attleboro* [273 U.S. 83 (1927)]. In a decision known in energy law circles as the “Attleboro Gap,” the Court ruled specifically that states could not regulate the interstate transmission of electricity because such transmission involves interstate commerce, and state regulation would violate the commerce clause of the U.S. Constitution. The Court did not preclude the possibility of federal regulation (McGrew, 2009, p. 140).

Holding companies also had significant knowledge and resource advantages over state regulators. Part of the knowledge advantage came from information asymmetry in the principal-agent relationship between insiders working for the companies and the regulators. This led to circumstances where the companies were able to get around existing regulatory constraints (Bradley, 1996, p. 79; Hirsh, 1999; Stigler & Friedland, 1962).³⁹ The ability of utilities to

³⁹ This happened with the accounting practices of the holding companies as they created new practices specifically designed to avoid rules and regulations by hiding profits through vertical corporate integration (Bradley, 1996, p. 79).

manipulate regulatory rules was assisted by the larger budgets the companies had to hire more talented experts than the state commissions could hire. Possibly important as well was the revolving door through which regulatory experts may have left the commissions to work for the holding companies (Bradley, 1996, p. 79; Hirsh, 1999, p. 45). Such experts could prove useful to holding companies in designing policies to circumvent specific rules and regulations.

The ability of state commissions to regulate holding companies may well have been hamstrung further by the theoretical underpinnings of state regulation. State regulation was supposed to be impartial and “scientific”; yet in practice it proved to be a subjective enterprise as regulators were forced to navigate terms like just and reasonable, fair value, and fair return (Bradley, 1996). State regulation also was designed to encourage the development of large monopolies that Progressive policymakers thought could deliver electricity to consumers more efficiently (Bradley, 1996; Hirsh, 1999). Progressives would discover they were mistaken in believing that they could control these powerful behemoths once they were created; cozy relationships between state regulators and the holding companies began to form, further limiting the effectiveness of state regulation (Bradley, 1996; Hirsh, 1999).

Finally, the advent of holding companies created an obstacle to the expansion of electric utilities into rural areas. Holding companies were designed to maximize profits for their shareholders, and providing electricity to sparsely populated rural areas was seen as a money loser (Hirsh, 1999; Melnyk & Lamb, 2006, p. 3). In response rural residents were forced to rely upon the development of municipal government-owned utilities for electric service.

The Great Depression. The 1929 stock market crash signaled the start of a national economic collapse. Buried below the headlines was the contributing role that utility holding companies played. Because many of their activities were interstate in nature, utilities were largely immune from state regulation, and the federal government did not have an agency to do so. Part of the problem stemmed from how holding companies handled their books to hide both their assets and their liabilities (Bradley, 1996; Hirsh, 1999; Melnyk & Lamb, 2006). Through the manipulation of financial records, some holding companies were able to mask significant financial problems, resulting in overcapitalization. As a result they were highly leveraged, simply not worth what their balance sheets indicated (Bradley, 1996).

“Holding companies tended to use a pyramid structure where one company controlled others through the ownership of stock. These firms tended to raise capital through non-voting

preferred stock and bonds” (Melnyk & Lamb, 2006, p. 4). The pyramid structure collapsed during the Great Depression, “leading to the bankruptcy of 53 holding companies; 36 utilities with publicly held securities went bankrupt as well” (p. 4). The bankruptcy of these firms sent ripples throughout the U.S. economy, causing problems for both investors and utility customers and ultimately resulting in congressional investigations and criminal prosecutions (p. 4).

Change for the Federal Power Commission. In 1930 Congress adopted legislation reorganizing the Federal Power Commission (FPC) into an independent regulatory commission with five commissioners appointed by the president and confirmed by the Senate (P.L. 71-412; 46 Stat. 797). The commissioners were to be appointed for five year terms that expired on a rotating basis; any person selected to fill a vacancy prior to the expiration of a term could only be appointed until the end of that term. Only three commissioners could be from the same political party, and none of the commissioners could have any relationship with the utility industry (P.L. 71-412; 46 Stat. 797).

Election of 1932. Franklin Roosevelt saw the malfeasance the utility holding companies had engaged in and was a long term critic of their practices well before he ran for president. As early as 1929 he publicly pointed out that the holding companies were overcapitalized, and state public utility commissions were incapable of addressing the problem (Bradley, 1996, p. 82). He hinted broadly that if he were elected president he would support federal regulation of electric utilities and holding companies (Roosevelt, 1932). Roosevelt took office with strong Democratic majorities in Congress. Members of Congress and the Administration waited for the results of a comprehensive Federal Trade Commission (FTC) study of the electric utility industry, conducted between 1928 to 1935, before crafting legislation (U.S. Energy Information Administration, 2000, p. 5; Bradley, 1996, pp. 83-84; Melnyk & Lamb, 2006, p. 4). Results of the study led to the passage of new federal legislation designed to address the problems the study identified, marking the start of the third regulatory era for private electric utilities.

The Third Era: 1935 – 1968

The results of the FTC study served as an indictment of the utility holding companies, detailing the problems the companies had caused. Findings included that holding companies had:

- (1) issued securities at an inflated value,
- (2) charged disproportionate fees for construction and management,
- (3) created paper profits through intercompany

transactions, (4) extended their ownership to disparate and non-integrated utilities leading to inefficiency and a lack of coordination, (5) used subsidiaries to issue excessive service charges, (6) overstated the effect of inflation and intangibles, (7) used their structure to evade state regulation, and (8) generally engaged in accounting malfeasance to prevent proper public oversight (in Bradley, 1996, p. 83; Melnyk & Lamb, 2006, pp. 4-5).

In response to the report the President convened a committee to examine issues related to the electric utility industry and make recommendations to improve the electric system in the United States; Congress held hearings at the same time (Bradley, 1996, p. 84). Both the presidential committee and Congress came to the same conclusion: federal laws needed to be adopted to regulate the behavior of holding companies (p. 84).

President Roosevelt signed the Public Utility Act of 1935 (P.L. 74-333; 49 Stat. 803) into law on August 26, 1935. It contained two titles designed to regulate different aspects of the electric utility business. Title I, known as the Public Utility Holding Company Act (PUHCA; P.L. 74-333; 49 Stat. 803-838), gave the Securities and Exchange Commission (SEC) the authority to regulate the securities issued by holding companies and their subsidiaries to make sure they remained financially sound to protect both investors and electricity consumers (Abel, 1999; Melnyk & Lamb, 2006, p. 6). Title II contained three parts that both clarified and expanded Federal Power Commission jurisdiction over private electric utilities in what is known as the Federal Power Act of 1935 (P.L. 74-333; 49 Stat. 838-863).

Part I of the FPA made a number of technical amendments to the Federal Water Power Act (FWPA) of 1920 (P.L. 74-333; 49 Stat. 838-847, §§ 201-212). Part II detailed the jurisdiction of the Commission to regulate private electric utilities (P.L. 74-333; 49 Stat. 847-854, § 213). Specifically, the FPA provided for the federal regulation of the interstate transmission and wholesale sale of electricity [P.L. 74-333; 49 Stat. 847; § 213; § 201 (a)].⁴⁰ Another provision promoted voluntary regional interconnection and coordination among electric energy facilities at the direction of the Commission (P.L. 74-333; 49 Stat. 848-849; § 213; §

⁴⁰ Such regulation extended to electricity transactions with foreign countries, principally Canada and Mexico. Furthermore, the FPC was granted the authority to ensure that rates charged by utilities for electricity transmission and wholesale sales were “just and reasonable.” Ensuring “just and reasonable” rates meant that the Commission could set and enforce rate schedules, and future rate changes required Commission approval (P.L. 74-333; 49 Stat. 851-852; § 205).

202). The FPC also was granted emergency powers that it could wield in response to a crisis to maintain electricity service [P.L. 74-333; 49 Stat. 849; § 213; § 202 (c)]. Finally, utilities could not purchase or sell facilities, buy or sell securities or take on liabilities without first getting FPC approval (P.L. 74-333; 49 Stat. 849-851; §§ 203-204).

Part III of the FPA laid out how it would be administered (P.L. 74-333; 49 Stat. 854-863, § 213). The Federal Power Commission could require and inspect records and accounts kept by utilities (P.L. 74-333; 49 Stat. 854; § 213; §301). The Commission also could determine the rates of depreciation for a utility; it could require utilities to complete reports by certain dates; and it could investigate complaints and allegations of misconduct against a utility (P.L. 74-333; 49 Stat. 855-858; § 213; §§ 302, 304, 306-307). Finally, under the statute, the Commission⁴¹ could issue rules, regulations, and orders, and legal processes were established for administration and enforcement (P.L. 74-333; 49 Stat. 858-862; § 213; §§ 309, 311, 313-317).

Regulatory Consolidation. After passage of the Natural Gas Act of 1938 (P.L. 75-688; 52 Stat. 821), the FPC, and the private electric utility and natural gas industries entered a period of regulatory consolidation. This was marked by relative market and regulatory stability, with infrequent federal court cases and statutory amendments to the Public Utility Act of 1935. Until 1965 there was general industry and national economic stability and policy consensus (Gormley, 1983; Hirsh, 1999).

Much of the regulatory stability likely came from federal court decisions upholding the power of the Federal Power Commission to regulate both private electric utilities and natural gas companies. Relatedly, in *Tennessee Electric Power Co. v. Tennessee Valley Authority* [306 U.S. 118 (1939)], the U.S. Supreme Court ruled in favor of TVA's ability to sell electricity in direct competition with a private firm. After this decision, the TVA would become a major competitor of private firms that generated electricity. Such competition may have provided additional reasons for private utilities to follow the regulatory dictates of the FPC, since failure to do so might well have led to a nationalized electric grid system.

⁴¹ It is also important to note, because this will become relevant later, that the statute states that if there is a conflict in jurisdiction between the FPC and the SEC under PUHCA, the SEC and the provisions of PUHCA applied (P.L. 74-333; 49 Stat. 863; § 213; § 318).

The Supreme Court issued another decision that would have profound implications for how the Commission set both natural gas and electricity rates.⁴² In *Federal Power Commission v. Hope Natural Gas Company* [320 U.S. 591 (1944)], the Supreme Court ruled that the Commission could set natural gas rates through any accounting process it chose as long as the resulting rates were reasonable. Essentially, the Court gave the Commission wide latitude in the process used to determine what reasonable natural gas and electricity rates would be so long as the rates produced were “reasonable.”

Congress, however, soon began taking actions that suggested it was not entirely pleased with how the Commission was performing. A sign of possible dissatisfaction appeared with the passage of Reorganization Plan No. 9 of 1950 (P.L. 81-920, 64 Stat. 1265).⁴³ The plan transferred from the Commission to the Commission chair responsibility for appointments and supervision, the distribution of work, and spending [P.L. 81-920; 64 Stat. 1265; § 1 (a)]. The law required the Chair to follow general Commission policies, regulatory decisions, findings, and determinations [P.L. 81-920; 64 Stat. 1265; § 1 (b) (1)]. Chair appointment of heads of major administrative units was made subject to final Commission review [P.L. 81-920; 64 Stat. 1265; § 1 (b) (2)]. The Commission retained its authority to revise budget estimates and over “the distribution of appropriated funds” [P.L. 81-920; 64 Stat. 1265; § 1 (b) (4)]. Finally, the statute transferred the ability to choose a chair from the Commission to the president (P.L. 81-920; 64 Stat. 1265; § 3). Clearly, the net effect of this law was to assign much of the responsibility and accountability for the Commission’s work to one person, the chair.

In 1952 for the first time in two decades a Republican president, House, and Senate were elected, providing the opportunity to see if partisan control made any difference for the

⁴² See Robichek (1978) who described how *Hope* set a legal precedent for how the FPC and later FERC would set rates for both natural gas and electricity.

⁴³ Reorganization Plan No. 9 of 1950 was facilitated by the Reorganization Act of 1949 (P.L. 81-109; 63 Stat. 203). The 1949 act gave the president the authority to issue a reorganization plan for all federal agencies if necessary to improve “execution of the laws,” cut costs, improve efficiency, coordinate and consolidate agency functions, eliminate unnecessary agencies, and “eliminate overlap and duplication” (P.L. 81-109; 63 Stat. 203; § 2). Evidently, President Truman found that the FPC would operate more efficiently if administration was moved from the Commission generally to the Chair of the Commission, and it would appear that Congress agreed as evidenced by the passage of Reorganization Plan No. 9 in 1950. If the Commission had been perceived as operating at peak efficiency such a change would have been unnecessary.

Commission. The FPC only saw some small changes in its power and jurisdiction between 1953 and 1954. On August 7, 1953, a new law (P.L. 83-210, 67 Stat. 461) went into effect, stating that when the sale or transmission of electricity resulting in transmission from or to one state across an international border it did not mean the facility involved was a public utility subject to regulation under the Federal Power Act. States in which such facilities were located could regulate them as long as doing so did not interfere with Commission jurisdiction (P.L. 83-210, 67 Stat. 461).

Beyond clarifying the FPC's regulatory authority over the electric utility industry, Congress also sought to clarify the Agency's administrative enforcement process. In 1958 Congress amended the Federal Power Act (P.L. 85-791, 72 Stat. 947), allowing the Commission to change or to keep in place a "finding or order" related to electricity until a complaint was filed with a U.S. appeals court (§ 16).

Cracks at the FPC. One can speculate that prior to 1960 Congress was not always completely satisfied with how the Federal Power Commission performed its duties. Certainly, one might argue that this was the case based upon restructuring of the Agency into an independent regulatory commission in 1930, approval of Reorganization Plan No. 9 in 1950, and the commissioner succession legislation adopted in 1960. The 1960 legislation allowed commissioners to stay on until their successors could take over or the session of Congress ended, whichever came first (P.L. 86-619; 74 Stat. 407; § 2). This legislation apparently was designed to provide more continuity at the Commission by giving the Senate and the president more time to replace a commissioner whose term either had expired or was expiring.

Before taking office in 1961, President-elect John F. Kennedy asked John Landis to conduct a study of the effectiveness of all federal agencies and to report on how each agency was performing. As devastating as the FTC report on the behavior of utility holding companies had been nearly a generation earlier, the Landis Report was at least as critical in its indictment of the performance of the Federal Power Commission. First, the Report indicated that in 1959 the Agency had a backlog of adjudicatory proceedings that could take up to 13 years to clear up (Landis, 1960, p. 6). Combining the backlogged cases and those it expected to receive in the next 13 years, the Agency predicted that even if its staff were tripled it could not become current in its proceedings by 2043 (p. 6). Next, even though both Congress and the Supreme Court had greatly expanded the jurisdiction of the Commission, Congress did not respond by providing

more money or authorizing the FPC to hire more personnel (p. 7). The results were predictable as the Agency became flooded with work and did not have the funds or the personnel to deal with the increased workload. This resulted in inaction in many cases, which ultimately cost companies and consumers millions of dollars (p. 9). Furthermore, the Commission suffered from overlapping jurisdictions with other agencies (p. 22). To make matters worse, the chain of authority at the Commission was unclear, and the federal courts found that the Commission had failed to adequately perform its duties in protecting the public interest in natural gas rate cases (pp. 23-24). Ultimately, Landis concluded that the Agency was an excellent example of administrative failure and that it needed to be reorganized in a substantial way as soon as possible (pp. 46-47).

It would be nearly 17 years before Congress actually reorganized the Federal Power Commission. Luckily for the energy industry and consumers, the national economy and the overall industry environment were good during this time, so few people outside of the federal government seemed to notice the problems engulfing the Commission. In the late 1960s and into the 1970s the industry and consumers would not be so fortunate.⁴⁴

Congressional Response to the Landis Report. In 1962, seeking to decrease FPC's workload, Congress passed a law that reduced the number of hydroelectric projects that needed oversight by increasing the amount of horsepower required before Commission approval was necessary for alterations, charges, and condition waivers (P.L. 87-647, 76 Stat. 447).

However, the President added to the Commission's workload in 1963, with Executive Order 11095 (Kennedy, February 26, 1963) requiring the FPC to engage in emergency preparedness preparations. Emergency preparedness was a major concern at the time due to the Cold War, and federal elected officials believed it was necessary to have plans in place to protect American infrastructure both prior to the commencement of hostilities and in response to hostility.

Luck Runs Out – Blackouts. Throughout much of the 1940s, the 1950s, and half way through the 1960s most consumers of electricity and electric utilities enjoyed a period of industry and economic stability. This stability manifested itself in a growing and reliable private utility system for most consumers who could rely on energy almost without interruption. Hidden below

⁴⁴ The study will show below that having a capable industry regulator is most crucial during times of crisis.

this stability were the roiling problems at the Federal Power Commission, which had developed a well-earned reputation for fecklessness. Utilities and consumers, however, were about to face a series of problems that would have profound effects on society and the industry that continued into the 21st century. The FPC was simply too weak to mitigate these problems.

Technological problems in the private electric utility industry began to appear in a dramatic way. On November 9, 1965, one of the largest power blackouts to ever occur in the U.S. happened in the northeastern United States a little after 5 p.m. (Federal Power Commission, 1965). The blackout knocked out power for roughly 30 million people over an 80,000 square mile area that included virtually all of New York, Connecticut, Massachusetts, Rhode Island, and small segments of Pennsylvania and northeastern New Jersey (p. 2). Also affected were parts of New Hampshire, Vermont, and Ontario, Canada. The blackout was caused when a backup relay on a transmission line in Canada malfunctioned, causing a circuit breaker to disconnect the line and shift too much power onto the other operating transmission lines, forcing the circuit breakers on those lines to disconnect as well (p. 6). Similar, though somewhat smaller cascading power failures had occurred in the Midwestern United States in 1965 (Federal Power Commission, 1965), and another took place in the Mid-Atlantic states of Pennsylvania, New Jersey, Maryland, and part of Delaware in 1967 (U.S. Congress. Senate. Committee on Commerce, 1967). Some of the blame for these power failures lay with the success of the Federal Power Act of 1935 itself, which was designed to encourage the development of regionally interconnected grid systems that were susceptible to cascading power failures that are not possible with small, unconnected grid systems.⁴⁵

Responding to the 1965 northeast blackout, with the approval of the Johnson administration, the Federal Power Commission requested the passage of legislation, known as the Electric Power Reliability Act of 1967 (S. 1934), to establish regional reliability entities to improve system outcomes and to prevent future blackouts (Gent, 1995; Hamilton, 1979). Had it been adopted, the legislation would have allowed the Commission to develop reliability standards, to review construction plans for transmission lines, and to require the interconnection of bulk power suppliers (Hamilton, 1979, p. 84). Mindful perhaps of the Agency's dysfunctional

⁴⁵ Cascading power failures are a possibility with large interconnected grid systems because circuit breakers and other mechanical devices including computers do not always work properly, and human beings often cannot respond quickly enough to prevent such a power failure once it begins.

history, Congress opted to let the industry develop its own regional reliability entities instead of authorizing the FPC to do so. Once established, the entities signed an agreement establishing the North American Electric Reliability Council (NERC) in 1968 to assist private electric utilities in greater efforts at coordination designed to prevent future blackouts (North American Electric Reliability Council, 2009; Gent, 1995; Hamilton, 1979). Unlike the early non-profit regulators of the pre-regulation era, these non-profits (NERC and the regional reliability entities) almost from the start had a more direct relationship with government regulators (Joskow, 2005b).

Fourth Era

The Fourth Era before FERC: 1968 – September 30, 1977

While the formation of the regional reliability entities and NERC in 1968 in some sense marked the beginning of the fourth regulatory era, in other ways the era is defined more specifically by three problems. By 1968 the utility industry, consumers, and various utility-related regulatory entities had to cope with technological stagnation, economic problems, and environmental concerns (Gormley, 1983; Hirsh, 1999). Prior to the late 1960s utility technology had generally improved (Hirsh, 1999), but by 1968 the industry was in desperate need of new thinking and, most of all, new technology to address two other significant and growing problems.

One such problem was economic stagflation caused by high levels of federal government spending on the Vietnam conflict and Great Society programs, which resulted in higher prices throughout the rest of the economy and growing unemployment. Higher prices and unemployment occurred as government spending crowded out private sector borrowing, making it more difficult and expensive for utilities to gain access to the capital they needed (Joskow & MacAvoy, 1975). Electric utilities require access to lots of cheap capital to fund day-to-day operations and to fund research and development projects to create new technologies designed to improve efficiency and lower costs (Gormley, 1983). In the late 1960s and through much of the 1970s, the utilities simply were not able to raise sufficient capital required to develop new technologies, or even in some cases to maintain existing systems (Joskow & MacAvoy, 1975). The problem of stagflation was exacerbated by rising fuel prices caused by political instability in the Middle East.⁴⁶

⁴⁶ This was demonstrated most vividly by the oil embargo of the Organization of Petroleum Exporting Countries (OPEC) in 1973. OPEC instituted the oil embargo after the U.S. supported Israel when attacked by Arab countries in the Yom Kippur (or Arab-Israeli) War. The embargo

In the meantime, urbanization and industrialization had been occurring in the United States for well over one hundred years, bringing with them by 1968 both benefits and costs. Cost to the physical environment had been largely ignored up until the late 1960s. This cost was illustrated in stark terms to the American public in 1969 when the Cuyahoga River in Ohio caught on fire because the water contained so many chemicals from urban and industrial runoff (Adler, 2002). Other events like the publication of Rachel Carson's book *Silent Spring* (1962) and the Santa Barbara oil spill catalyzed the modern environmental movement in the U.S. In practical terms this placed a political bulls-eye on the backs of private utilities and energy-based regulatory agencies as the production and distribution of electricity necessarily meant the creation of some pollution. It became significantly more difficult for utilities to deliver energy to consumers without running into environmental roadblocks in the form of new environmental laws and lawsuits, resulting in increasing costs (Gormley, 1983; Hirsh, 1999).

Federal Responses. When Richard M. Nixon took office in 1969, he and Congress confronted a series of environmental challenges. Congress adopted and President Nixon signed into law the National Environmental Protection Act (P.L. 91-190, 83 Stat. 852) to improve national environmental quality and to address serious environmental problems. Not long after the enactment of NEPA in 1970, President Nixon issued Reorganization Plan Number 3 (Nixon, 1970), which created the Environmental Protection Agency (EPA) to oversee and administer federal responses to environmental problems and to regulate the behavior of people and businesses that engaged in activities that polluted the environment. Since all utilities have at least some environmental impact, the effect was to add one more regulator with jurisdiction over utilities in a regulatory setting that Landis (1960) had described as desperately needing more coordination and fewer overlapping jurisdictions and clearer jurisdictional boundaries. In 1970 and 1972, enactment of the Clean Air (P.L. 91-604, 84 Stat. 1676) and Clean Water acts (P.L. 92-500, 86 Stat. 816) further extended EPA jurisdiction over utilities.

caused electricity prices to spike upward as energy prices are sensitive to crude oil prices even though most electricity was generated by other fuel sources. (See Table 4 and Figures 7-9.) Between 1973 and 1982 the average price of electricity in the U.S. grew by 55 percent, while inflation-adjusted prices rose about 15 percent from 1973 to 1974, about the length of time of the embargo; this was by far the largest year-to-year price increase between 1960 and 2011 (U.S. Energy Information Administration -- Office of Energy Statistics, 2012).

At roughly the same time, President Nixon and Congress continued to make changes to energy-based regulatory efforts for electric utilities companies. Nixon issued Executive Order 11490 (October 28, 1969) that revoked Executive Order 11095 and restructured the emergency preparedness process for electric utilities; the Federal Power Commission was required to assist the Department of Interior in the development and implementation of emergency preparedness programs. Then, in 1970 legislation (P.L. 91-452; 84 Stat. 929; § 221) was enacted that eliminated the provision in the Federal Power Act that provided immunity to people “attending, testifying, or providing records” to the FPC in the course of an agency investigation.⁴⁷

In 1973 the Supreme Court addressed matters related to electric utility competition including wholesale sales and transmission interconnection. In *Otter Tail Power Company v. United States* [410 U.S. 366 (1973)] the Court ruled on whether a private electric utility could refuse to sell electricity wholesale (“wholesale wheeling”) to proposed municipal utility systems. The Court found that the Otter Tail Power Company had violated section two of the Sherman Anti-Trust Act by refusing to sell electricity to municipal systems. This ruling had implications for the Federal Power Commission’s regulation of private electric utilities because according to the Court the FPC did not have authority under the Federal Power Act to compel a utility to wheel electricity to another utility [410 U.S. 366 (1973), pp. 375-376].⁴⁸ The ruling left open the possibility, however, that the FPC could sue a private utility in federal court and get a court order

⁴⁷ The eliminated language can be found at P.L. 74-333; 49 Stat. 858; § 213; § 307 (g). This provision was important because when it was in effect people could be compelled to come forward to tell the Commission what they knew and to provide whatever information they had on any given topic, knowing they could not be prosecuted. However, after this provision was repealed it is difficult to see how the Commission could compel people to come forward with information if presenting such information could result in criminal prosecution. This change in the law opened the possibility for violations of the Fifth Amendment right protecting against self-incrimination and the assertion of the Fifth Amendment by people who had information related to utilities but were afraid to produce the information because it might result in criminal prosecution. Overall, this change in the law is important because one would expect that it made Commission investigations far more difficult.

⁴⁸ According to the Court, the Commission could issue an interconnection order to a utility for the purposes of wheeling, but even after such an order interconnection and coordination were voluntary [410 U.S. 366 (1973) p. 376]. As Coker (2005, pp. 248-250) points out, the authority to compel a utility to provide for interconnection and wheeling was never available to the FPC, and FERC did not gain that authority until passage of the Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2915 - 2919; §§ 721 & 722).

requiring the utility to sell electricity to another utility. The Court also contemplated the possibility that a federal court could order a utility to engage in electricity wheeling when the Commission opposed it but left that potential problem to be decided at a later time (p. 377).

Reacting to the spiking electricity prices due to the OPEC oil embargo, a 1974 statute (P.L. 93-319, 88 Stat. 246) encouraged electric power generating facilities to convert to coal as a fuel source. The law postponed the early phase-out of eligible power plants under section 119 subsection (i)(1) of the Clean Air Act (P.L. 93-319; 88 Stat. 254-255; § 3) for up to one year, even if the owner or operator of such a plant had filed a certification with the FPC and the EPA to close the plant. Additionally, the statute was designed to expedite the construction of facilities to import hydroelectric energy by eliminating the requirement that the FPC prepare environmental impact statements for the “construction, maintenance, operation, and connection” of such facilities under NEPA [P.L. 93-319; 88 Stat. 260; § 7 (d)].

By 1975 Congress, responding to a number of problems including stagflation, began to seriously consider reforming the Federal Power Commission a decade and a half after the Landis Report had made the same recommendation. Spearheading the effort was Representative John E. Moss, a Democrat from California. In late 1975 and early 1976 Moss, as chair of the Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce, held hearings on the possibility of reforming the FPC (U.S. Congress. Committee on Interstate and Foreign Commerce. Subcommittee on Oversight and Investigations, 1976).

Next, in *Federal Power Commission v. Conway Corporation* [426 U.S. 271 (1976)] the Supreme Court attempted to further clarify the jurisdiction of the Federal Power Commission in setting wholesale electricity rates. The question before the Court was whether the Commission could compare a company’s retail rates with its wholesale rates in order to determine if the wholesale rates were discriminatory and noncompetitive. The Court ruled that the FPC could compare such rates. Although this ruling did not expand the Commission’s jurisdiction, it did mean the Agency could look at another piece of evidence, retail prices, to determine if a company’s wholesale electric rates under the Federal Power Act were just and reasonable.

Changes started to take place in many areas of federal regulation following the election of Jimmy Carter in 1976. Carter turned out to be a staunch proponent of many new policy approaches, some of which he described as “deregulation.”

Creation of the Federal Energy Regulatory Commission

Congress finally reorganized the Federal Power Commission into the Federal Energy Regulatory Commission with the passage of the Department of Energy Organization Act (P.L. 95-91; 91 Stat. 565) on August 4, 1977. The reorganization occurred after nearly two decades of public criticism of the FPC by federal policy makers and federal judges.⁴⁹ Important differences between the FPC and FERC included that FERC commissioners were legally required to demonstrate that they were qualified to hold their positions through extensive knowledge in energy policy (P.L. 95-91; 91 Stat. 572; § 204). Moreover, Congress created FERC within the Department of Energy (DOE; P.L. 95-91; 91 Stat. 571-572; § 204), but maintained its status as an independent regulatory commission (P.L. 95-91; 91 Stat. 586; § 406). Furthermore, unlike the FPC, presidents could remove commissioners at FERC from office for “inefficiency, neglect of duty, or malfeasance” [P.L. 95-91; 91 Stat. 582; § 401 (b)]. Despite an effort to maintain the appearance of some independence from the Department of Energy and the elected executive,⁵⁰ it was clear from other provisions in the statute that FERC was supposed to work in concert with both.

Practically, this meant, for example, that the DOE Inspector General was required to report to FERC both yearly under normal circumstances, and immediately if administrative problems developed at the Department [P.L. 95-91; 91 Stat. 575; § 208 (c) & (d)]. The Secretary of Energy could assign regulatory matters to the Commission, including those involving the export or import of electricity [P.L. 95-91; 91 Stat. 585; § 402 (e) & (f)]. The Secretary could also set time limits for Commission action on the Secretary’s proposals affecting regulations that FERC enforced, and the Secretary could intervene and participate in any FERC proceeding [P.L. 95-91; 91 Stat. 585-586; §§ 403 (b) & 405]. Additionally, if the Secretary of Energy proposed actions associated with the transfer of authority from various agencies under certain specific sections of the law,⁵¹ the Secretary and the Commission were required to agree on the “final rule, regulation, or statement of policy” before it was issued (P.L. 95-91; 91 Stat. 586; § 404).

⁴⁹ To gain a better sense of FERC’s structure, the responsibilities of its Chair, its general operation, and the powers that were transferred to it from the Federal Power Act, see Table 5.

⁵⁰ Personnel at FERC were not “subject to the supervision or direction” of anyone at the Department of Energy [P.L. 95-91; 91 Stat. 583; § 401 (d)].

⁵¹ The statute transferred a variety of energy-based functions from the Federal Energy Administration, the Energy Research and Development Administration, and the Interstate

Congress designed FERC so that it was not completely independent of the elected executive. Instead, in Lewis's (2003) terms, Congress lessened the political insulation of FERC and increased its political accountability to the presidency through the Department of Energy as a way to improve its performance compared to the FPC.

FERC's Initial Operations. FERC had to operate in a policy environment characterized by numerous complexities and problems. The Commission inherited many of FPC's problems including a large volume of backlogged rate increases and licensing requests from the electric and natural gas industries, and the need to improve and speed up case management and processing of environmental impact statements (U.S. General Accounting Office, 1980, pp. i-viii). Among the other challenges FERC inherited were needs to improve managerial accountability, regulatory oversight, agency response times, and the accuracy of its data (pp. 73-74). Necessary as well was placing greater emphasis on more generic rulemaking (pp. 73-74).

In an effort to assist the Agency in dealing with some of these daunting challenges and to speed up the transition from the FPC to FERC, President Carter signed Executive Order 12009 (September 13, 1977). The Order instructed the OMB director to consult with the Secretary of Energy and FERC to expedite the transfer of authority from the Federal Power Commission to FERC.

As one might anticipate, almost immediately after its creation FERC began to face efforts to see if it was up to the task. For example, in *The Narragansett Electric Company v. Edward F. Burke et al.* [381 A.2d 1358 (1977)], heard by the Rhode Island Supreme Court, the state public utility commission challenged the supremacy of the federal government to regulate wholesale electricity rates under the Federal Power Act. The state Supreme Court upheld FERC's power to preempt state regulatory power in regulating wholesale electricity rates under the Federal Power Act; the U.S. Supreme Court denied certiorari [435 U.S. 972, *cert. denied* (1978)]. FERC clearly had the ability to regulate wholesale electricity rates when such sales take place through interstate commerce.

National Energy Act of 1978

Responding to the national energy crisis of the 1970s, Congress enacted the National Energy Act of 1978. The Act contained five different statutes, but only two of them directly

Commerce Commission to the Secretary of Energy [Federal Law No. 95-91; 91 Stat. 586, 577-578 & 581; §§ 404 (a), 301 (a) & (b), & 306].

impacted FERC and all private electric utilities: the Public Utility Regulatory Policies (PURPA; P.L. 95-617; 92 Stat. 3117) and the Power Plant and Industrial Fuel Use (P.L. 95-620; 92 Stat. 3289) acts.⁵²

Public Utility Regulatory Policies Act (PURPA)

Citing national security, environmental, and economic concerns Congress adopted PURPA to encourage energy conservation, decrease retail and wholesale electricity rates, increase the reliability of electricity, improve regulatory efficiency at FERC, and support development of small hydroelectric power projects (P.L. 95-617; 92 Stat. 3119; § 2). The primary ways PURPA addressed electricity-related issues was to encourage competition among utility and non-utility⁵³ electricity generators and to push utility power plants to rely less on natural gas as a fuel source. In particular the statute carved out protection for small power production and cogeneration facilities. Ultimately, it was up to the Commission to determine whether such facilities were “qualifying facilities.”⁵⁴

Unlike some markets with no barrier to entry, a physical barrier exists for non-utility electricity generators wishing to compete with utility generators. The barrier comes in the form of transmission lines, which serve as electricity bottlenecks because electricity can only be used if it is sold and transmitted over power lines. As a result, access to transmission lines is vital for

⁵² The other three statutes were known as the Energy Tax (P.L. 95-618; 92 Stat. 3174), the National Energy Conservation Policy (P.L. 95-619; 92 Stat. 3206), and the Natural Gas Policy (P.L. 95-621; 92 Stat. 3351) acts. Of the five statutes, the three that specifically affected FERC were PURPA, the Power Plant and Industrial Fuel Use, and the Natural Gas Policy acts as they added directly to the Agency’s regulatory duties (U.S. General Accounting Office, 1980, p. 1).

⁵³ A utility generator is a power plant owned and operated by the same company that owns and operates the transmission and distribution lines used to provide electricity within a given geographic region. A non-utility generator is a power plant that is owned by a different company than the one that owns and operates the transmission and distribution lines.

⁵⁴ A “small” power producer has a production capacity of 80 megawatts or less and generally uses fuels like geothermal, hydro, solar, wind, biomass, waste, or a combination [P.L. 95-617; 92 Stat. 3134; § 201; § 3 (17) (A) (i) & (ii)]. Usually cogeneration facilities are fired by natural gas; unlike small power producers they produce both electricity and heat (Federal Energy Regulatory Commission, 1985, p. 5), and the statute did not specifically limit the size of a cogeneration facility as it did small power producers [P.L. 95-617; 92 Stat. 3135; § 201; § 3 (18) (A) (i) & (ii)].

any utility, non-utility, state entity,⁵⁵ or federal entity⁵⁶ wishing to compete in the wholesale electricity generation marketplace.

Congress, hoping to establish wholesale competition among electricity generators, in PURPA gave the Federal Energy Regulatory Commission the authority to issue orders in response to applications from qualifying facilities, utilities, states, or federal power marketing agencies for transmission access to sell electricity [P.L. 95-617; 92 Stat. 3135-3136; § 202; § 210]. The Commission could issue an interconnection order to fix transmission problems or to increase capacity [P.L. 95-617; 92 Stat. 3135-3136; § 202; § 210 (a) (1)]. However, FERC could not issue an order if the transmitting utility was contractually obligated to transmit electricity to another utility [P.L. 95-617; 92 Stat. 3137; § 203; § 211 (c) (2) (A)] or if the applicant already had the same electricity transmitted under a pre-existing rate schedule [P.L. 95-617; 92 Stat. 3137; § 203; § 211 (c) (2) (B)]. Orders had to be consistent with state laws and could not involve retail sales [P.L. 95-617; 92 Stat. 3137; § 203; § 211 (c) (3) & (4)]. Finally, FERC could issue an order terminating or modifying a transmission order for a utility with the application of the affected utility [P.L. 95-617; 92 Stat. 3137; § 203; § 211 (d) (1)], or if transmission requirements had changed or excess transmission capacity was no longer available to provide the service [P.L. 95-617; 92 Stat. 3138; § 203; § 211 (d) (1)].

In addition, PURPA expanded the Commission's authority so that it could exempt electric utilities from state laws if doing so promoted the voluntary coordination⁵⁷ of electric utilities to improve reliability and conserve energy [P.L. 95-617; 92 Stat. 3140-3141; § 205 (a)]. States and non-regulated utilities had to create rules for qualifying facilities following FERC's establishment of a final rule [P.L. 95-617; 92 Stat. 3145; § 210 (f)], and the Commission could

⁵⁵ A state entity might include cooperatives, municipal utilities, or some type of state power authority.

⁵⁶ A federal entity might include a federal power marketing administration such as the Bonneville Power Administration (BPA) or the Tennessee Valley Authority (TVA).

⁵⁷ "Voluntary coordination" includes any agreement among utilities to maximize the benefits of facilities and resources in any area [P.L. 95-617; 92 Stat. 3140-3141; § 205 (a)].

take legal action against states and non-regulated utilities that failed to comply⁵⁸ [P.L. 95-617; 92 Stat. 3146; § 210 (g) & (h)].

PURPA required the Commission to further encourage cogeneration and small power production by requiring utilities to offer to sell and to purchase electricity from qualifying facilities [P.L. 95-617; 92 Stat. 3144; § 210 (a)]. FERC had to establish reliability standards for qualifying facilities, and it had to set rates through procedures similar to those used for utilities and that were reasonable for electricity bought from and sold to qualifying facilities [P.L. 95-617; 92 Stat. 3144-3145; § 210 (b) & (c)]. Qualifying facilities were to be exempted from provisions of both state and federal law⁵⁹ if the Commission determined that exemptions were necessary [P.L. 95-617; 92 Stat. 3145; § 210 (e)]. Finally, PURPA mandated that the Commission establish an easy and quick licensing process for small hydroelectric power projects (P.L. 95-617; 92 Stat. 3156; § 405).

Power Plant and Industrial Fuel Use Act

Meanwhile, the Power Plant and Industrial Fuel Use Act (P.L. 95-620; 92 Stat. 3289) mandated electric power plants to use coal and other alternative fuels in place of natural gas or petroleum in order to lower the price of electricity (P.L. 95-620; 92 Stat. 3291; § 102). The Secretary of Energy could exempt existing and new power plants on a case-by-case basis if in consultation with FERC⁶⁰ it was determined that the fuel mandate could result in reliability problems for the electric grid (P.L. 95-620; 92 Stat. 3293; § 103). The Act prohibited new power

⁵⁸ This provision illustrates what some have called coercive federalism (Bowman & Kearney, 2010; Kincaid, 2001). In this case federal legislation required states to develop rules to encourage the development of qualifying facilities; if they did not, they risked lawsuits filed against them in federal court by FERC, a utility, or a qualifying facility.

⁵⁹ Federal statutes from which FERC could exempt qualifying facilities included the Federal Power and the Public Utility Holding Company (PUHCA) acts of 1935.

⁶⁰ The Act also required FERC to develop rules related to the design capacity of a power plant [P.L. 95-620; 92 Stat. 3296; §103 (a) (18) (D)], to collect information from power plant and fuel burning unit operators (P.L. 95-620; 92 Stat. 3332; § 711), and to participate in a study of the performance of the coal industry (P.L. 95-620; 92 Stat. 3341; § 742).

plants from using natural gas⁶¹ or petroleum as a primary fuel source (P.L. 95-620; 92 Stat. 3298; § 201). For existing power plants, the statute created a date after which no plant could operate with natural gas as a primary fuel source, and the Secretary of Energy could prohibit the use of petroleum as the primary fuel source if other fuel sources were available and could be used (P.L. 95-620; 92 Stat. 3305-3306; § 301).⁶²

The Regulatory Environment after PURPA

Regulatory Consolidation

The passage of major pieces of federal legislation usually is followed by a period of regulatory consolidation and inactivity by Congress. This definitely was true after the enactment of PURPA. The Commission saw a consolidation of its authority between 1980 and 1985, highlighted by statutes that further shaped its administrative responsibilities and by important Supreme Court decisions. One statute that passed two years after PURPA was adopted gave the Commission the authority to exempt small hydroelectric power projects from some or all of the requirements of the Federal Power Act (P.L. 96-294; 94 Stat. 718).⁶³

Election of 1980 and the Reagan Years

The elections of Ronald Reagan as President and a Republican Senate did not seem to produce any notable legislative changes or executive orders for private electric utilities or FERC in 1981. The next important year for the Commission was 1982. First, the U.S. Supreme Court, in *Federal Energy Regulatory Commission (FERC) v. Mississippi* [456 U.S. 742 (1982)], ruled that Titles I and III of PURPA were constitutional under both the Commerce Clause and the

⁶¹ It is important to note that cogeneration facilities are exempted from the fuel requirements of this act as most cogenerators were and still are fueled by natural gas [P.L. 95-620; 92 Stat. 3301-3302; § 212 (c)].

⁶² From its days as the Federal Power Commission, FERC had struggled with or at least had received considerable criticism for how it handled natural gas regulation. The Natural Gas Policy Act of 1978 (P.L. 95-621; 92 Stat. 3351) supplemented the Natural Gas Act of 1938 and included a provision for deregulation for certain categories of natural gas (P.L. 95-621; 92 Stat. 3369-3371; §§ 121-123).

⁶³ Such exemptions included FERC's ability to classify a project as a small hydroelectric project if it uses natural water features instead of an existing dam without environmental damage (P.L. 96-294; 94 Stat. 718). Under the statute FERC could also exempt natural gas from provisions of the Natural Gas Act if the particular gas in question had been conserved due to a state residential efficiency program (P.L. 96-294; 94 Stat. 749).

Tenth Amendment. Mississippi had objected to the Act's provisions because they preempted state authority and required the states to create regulations encouraging the development of qualifying facilities or face the potential of a federal lawsuit. This ruling meant that FERC could continue to enforce PURPA. The U.S. Supreme Court further encouraged the implementation of PURPA in *American Paper Institute v. American Electric Power Service Corporation* [461 U.S. 402 (1983)]. FERC had not acted inappropriately or exceeded its authority when it prescribed rules to encourage the development and interconnection of qualifying facilities under section 210 of the Act.

FERC had a very difficult and eventful year in 1986. First, as Garvey (1993) described, the Commission was embroiled in an Inspector General's investigation after a political appointee accused of sexual harassment in turn alleged that FERC management had engaged in illegal behavior. The investigation hampered FERC's abilities to perform its regulatory functions. On a more positive note, the U.S. Supreme Court in *Nantahala Power & Light Company v. Thornburg* [476 U.S. 953 (1986)] affirmed FERC's exclusive regulatory jurisdiction over interstate wholesale electricity rates.

Congress further complicated the Agency's regulatory efforts with the passage of two bills in 1986. The first, the Electric Consumers Protection Act of 1986 (P.L. 99-495; 100 Stat. 1243), required FERC when issuing licenses and permits under the Federal Power Act and PURPA to give equal consideration to numerous factors including energy conservation, environmental protection, protection of fish and wildlife, recreational opportunities, and energy production. Prior to the Act, the Commission was to make license and permit decisions solely based on energy production factors. The new legislation also gave FERC monitoring and enforcement responsibilities over the expanded list of licensing and permitting considerations. The second statute (P.L. 99-546; 100 Stat. 3056) amended the Federal Power Act so that licensees would not be charged fees for the use of a government dam if doing so met certain requirements.

Democrats Retake the Senate 1987. Democrats retook control of the U.S. Senate in 1987, and a few minor changes to FERC's regulatory jurisdiction followed. FERC's FY 1988 appropriations legislation (P.L. 100-202; 101 Stat. 1329-126 & 1329-127) allowed it under certain conditions to extend regulations to qualifying facilities using solar energy under the Energy Security Act. The U.S. Supreme Court reinforced its decision in *Nantahala* in *Mississippi Power & Light Company*

v. *Mississippi* [487 U.S. 354 (1988)], ruling that state public utility commissions cannot overrule FERC power allocations as unreasonable in establishing retail rates. Meanwhile, Congress enacted legislation that allowed the Commission to begin proceedings to determine if rates were appropriate under the Federal Power Act; if it found that a consumer overpaid, then a refund must be issued by the offending utility (P.L. 100-473; 102 Stat. 2299).

Consolidation Ends

End of Reagan Years

Substantial change occurred for FERC and private electric utilities beginning in 1989 after President Reagan left office. Deregulation came to the natural gas industry with the enactment of the Natural Gas Wellhead Decontrol Act of 1989 (P.L. 101-60; 103 Stat. 157)⁶⁴; the legislation was passed by a Democratic Congress and signed into law by Republican President George H.W. Bush in an effort to lower natural gas prices over the longer term.⁶⁵ The statute eliminated wellhead price and non-price controls on the first sale of natural gas. Such deregulation likely was a welcome development for FERC as the regulation of natural gas generally had been a thorn in the Commission's side, dating back to the days of the Federal Power Commission. This legislation also marked a major exception to Congress's affinity for adding regulatory responsibilities to the Agency.

Gulf War and Other Issues: 1990-1991

A number of important events happened in 1990 that had a direct impact on the Commission, some of which might be attributed to concerns over the potential rise in oil prices as a result of the first Gulf War. First, Congress increased the terms of FERC commissioners to five years and allowed commissioners to serve until a replacement was confirmed or a

⁶⁴ Unlike market restructuring for electric utilities, passage of this legislation brought deregulation for natural gas. Deregulation occurs when regulations for a particular product or service are diminished or eliminated. As Griffin and Puller (2005) and McGrew (2009) note, the description of market restructuring for private electric utilities as "deregulation" is in fact a misnomer. Griffin and Puller go so far as to suggest that market restructuring was described as "deregulation" because it was easier to build public support for deregulation than for mandated market competition.

⁶⁵ Natural gas prices had been regulated since the Natural Gas Act of 1938, and prices rose considerably in the late 1960s and early 1970s. Many policymakers in both parties had come to the conclusion that price deregulation for gas produced at the wellhead was worth a try to get prices down as regulatory efforts to do the same thing had failed.

congressional session ended (P.L. 101-271; 104 Stat. 135). Next, in *California v. FERC* [495 U.S. 490 (1990)], the U.S. Supreme Court sided with the Agency in a case in which California had a more stringent set of regulatory guidelines for a hydroelectric project than FERC. The Court found FERC's guidelines to be controlling. Legislation later removed the size limitation on solar, wind, waste, and geothermal power production and made all facilities eligible for qualifying facility designation (P.L. 101-575; 104 Stat. 2834).

In *Arcadia, Ohio, et al., Petitioners v. Ohio Power Company et al.* [498 U.S. 73 (1990)] the Supreme Court made a decision that ultimately resulted in congressional repeal of PUHCA.⁶⁶ The case involved a disagreement between the SEC and FERC over the appropriate price of coal for the Ohio Power Company. The SEC specified a price under jurisdiction provided by PUHCA, which FERC then disallowed under the Federal Power Act. The Court ruled, however, that under section 318 of the Federal Power Act when a jurisdictional conflict occurred between the FPA and PUHCA, PUHCA and the SEC were controlling.

Energy Policy Act of 1992

Responding perhaps to concerns that the Gulf War would result in higher energy prices, Congress adopted the Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2776), changing FERC's authority in a number of ways. Most importantly, for the purposes of promoting wholesale electricity wheeling, the statute altered FERC's transmission authority. Previously, under the Federal Power Act the Commission could issue orders to encourage voluntary interconnection to improve grid system reliability. The Energy Policy Act of 1992 amended that provision to allow FERC to compel transmission utilities to transmit electricity generated by another entity⁶⁷ [P.L. 102-486; 106 Stat. 2915-2916; §§ 721 & 722; §§ 211 (a) & 212 (a)]. The Act also made the Agency responsible for ensuring that the rates charged for wholesale transmission services were reasonable, promoted economical generation and transmission of electricity, and did not come at the expense of consumers [P.L. 102-486; 106 Stat. 2916; § 722; §

⁶⁶ This happened in the Energy Policy Act of 2005.

⁶⁷ This provision included any entity that generated electricity and requested transmission access so it could sell the resulting electricity in the wholesale market (P.L. 102-486; 106 Stat. 2915-2916; § 721). FERC also could order any entity defined as a transmitting utility (including the TVA and federal power marketing agencies) to provide transmission service [P.L. 102-486; 106 Stat. 2917-2919; § 722; § 212 (i); P.L. 95-617; 92 Stat. 3139-3140; § 204; § 212 (f)].

212 (a)]. Any FERC orders issued for transmission access had to be consistent with state laws [P.L. 102-486; 106 Stat. 2916; § 722; § 212 (g)], and orders could not be issued for retail purposes [P.L. 102-486; 106 Stat. 2916-2917; § 722; § 212 (h)]. Additionally, the legislation required the Commission to request that transmitting utilities submit information on a yearly basis in order to inform potential transmission customers of capacity constraints [P.L. 102-486; 106 Stat. 2920; § 723; § 213 (b)]. Finally, the Energy Policy Act added enforcement provisions that FERC could use if statutory provisions or orders related to wholesale transmission services were violated [P.L. 102-486; 106 Stat. 2920-2921; § 725; § 316A].

Development of Wholesale Electricity Competition

The Energy Policy Act of 1992 created both new industry and regulatory provisions for private electric utilities. One provision promoted the development of stand-alone wholesale generators of electricity that were not utilities by allowing them to apply to the Commission for non-utility status under federal law (P.L. 102-486; 106 Stat. 2905-2910). Another provision provided for mandatory transmission access making competition among wholesale generators of electricity easier (P.L. 102-486; 106 Stat. 2915-2919). The new provisions were designed to encourage wholesale competition among utility and non-utility generators of electricity, and the transition to wholesale markets to take advantage of such competition.

The Rise and Partial Collapse of Managed Wholesale Competition

The Clinton Years

Private electric utility wholesale market restructuring reached its zenith during the Clinton years, perhaps driven in part by the Administration's proposal in 1999, known as the "Comprehensive Electricity Competition Act" (S.1047/H.R.1828),⁶⁸ to establish managed wholesale electricity competition throughout the country. Although PURPA and subsequent federal legislation such as the Energy Policy Act of 1992 were designed to encourage utility market restructuring, they ultimately left it up to the states to decide whether they should adopt managed competition (Andrews, 2000; Joskow, 2005a; Ka & Teske, 2002). Several studies (e.g., Andrews, 2000; Ka & Teske, 2002) have found that states were more likely to support restructuring if they had high electricity prices and highly professional public utility

⁶⁸ This bill never became law. Even so, legislative proposals sometimes can influence actors even if they do not pass.

commissions.⁶⁹ States choosing to opt for managed competition approached restructuring in many different ways, with varying levels of success. Some states, like New York and Pennsylvania, created and have maintained managed competition, while others, like California and Virginia, had problems with managed competition and abandoned it completely. Through it all FERC developed a reputation among the states as an untrustworthy partner in market restructuring, resulting in growing state resistance to the Agency's pro-competition policies by the end of 2000 (Joskow, 2005a).

The George W. Bush Years

President George W. Bush took office in 2001 and immediately confronted the ongoing California electricity crisis that had started following the state's failures in restructuring its wholesale electric utility markets. To complicate matters further, FERC Chair Curt Hebert, Jr., was under investigation for allegedly having *ex parte* communications with Ken Lay, the Chair of Enron, although Hebert ultimately was absolved of any wrongdoing (U.S. General Accounting Office, 2001).⁷⁰

The California crisis ultimately was resolved and other issues emerged, starting in 2002. The U.S. Supreme Court issued important opinions in two cases involving FERC's authority. The Court ruled in *New York v. FERC* [535 U.S. 1 (2002)] that the Agency had the authority under the Federal Power Act to require a utility to transmit a competitor's electricity over its lines under the same terms that the utility applied to its own transmissions. Further, FERC did not have to require such transmission conditions on bundled retail sales. This decision allowed the Commission to regulate retail sales of electricity if they occur in interstate commerce, though FERC generally chose not to regulate such sales and left much of the regulation of such sales to the states. Next, *Entergy Louisiana, Incorporated v. Louisiana Public Service Commission* [539 U.S. 39 (2003)] found that a rate tariff FERC had approved preempted state ratemaking authority.

Just after these opinions provided greater clarity to FERC's regulatory authority, the Northeast blackout occurred on August 14, 2003. It was the largest blackout in history,

⁶⁹ See Table 6 listing the states that restructured their electricity markets.

⁷⁰ Enron played a key contributing role in the problems that developed in the wholesale electricity markets in California through its fraudulent activities.

involving parts of eight different states⁷¹ and roughly 50 million customers, caused when a transmission line sagged into a tree in Ohio resulting in a cascading power failure (U.S.-Canada Power System Outage Task Force, 2004). Together, the California electricity crisis and the blackout finally forced Congress to act.

Energy Policy Act of 2005

In response to the problems identified by *Arcadia*, the California electricity crisis, and the Northeast blackout of 2003, Congress enacted the Energy Policy Act of 2005 (P.L. 109-58; 119 Stat. 594). The statute requires FERC to consult with state and other federal agencies and other interested parties in the western states to designate corridors for siting pipelines, electricity transmission lines, and electricity distribution lines on federal land (P.L. 109-58; 119 Stat. 727-728; § 368). FERC also acquired jurisdiction to certify one organization as a national Electric Reliability Organization (ERO) to assist the Commission in the development and enforcement of reliability standards for transmission systems throughout the United States (P.L. 109-58; 119 Stat. 941-946; § 1211; § 215). Moreover, the Act directed the Secretary of Energy to perform periodic studies to identify and designate states or areas within states where transmission infrastructure was insufficient as national interest electric transmission corridors. In turn, FERC could issue permits for the construction or modification of transmission facilities in those corridors (P.L. 109-58; 119 Stat. 946-951; § 1221; § 216). The legislation required FERC to encourage the use of advanced transmission technologies (P.L. 109-58; 119 Stat. 953-954; § 1223; § 216) and the development of new transmission facilities to meet increasing electricity demand (P.L. 109-58; 119 Stat. 958; § 1233; § 217). Additionally, the Act mandated that the Commission establish new rate structures for interstate electricity transmission in order to lower costs and to improve reliability (P.L. 109-58; 119 Stat. 961-962; § 1241; § 219).

When the Energy Policy Act of 2005 repealed the Public Utility Holding Company Act (PUHCA) of 1935, it was repealed and replaced with the Public Utility Holding Company Act of 2005; it eliminated the jurisdictional conflicts *Arcadia* highlighted. The 2005 legislation required utilities and holding companies to keep all records and accounts open for Commission inspection and mandated that the SEC transfer all past records and jurisdiction to FERC (P.L. 109-58; 119 Stat. 974 & 977; §§ 1263, 1264, & 1273).

⁷¹ It included parts of Connecticut, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, Vermont, and parts of the Canadian provinces of Ontario and Quebec.

Finally, the Energy Policy Act of 2005 required FERC to encourage transparency for wholesale electricity and transmission prices through the public dissemination of availability and price [P.L. 109-58; 119 Stat. 978; § 1281; § 220 (a)] and to act in concert with the Commodity Futures Trading Commission to prevent market manipulation, as had occurred in the California electricity crisis [P.L. 109-58; 119 Stat. 979-980; §§ 1281-1283; §§ 220 (c), 221, & 222].

Consolidation after the Energy Policy Act of 2005

As with the other major pieces of energy-related legislation, passage of the Energy Policy Act of 2005 was followed by a brief period of regulatory consolidation. After Democrats regained control of Congress in 2007, however, the Energy Independence and Security Act of 2007 was passed (P.L. 110-140; 121 Stat. 1492). This legislation promoted the use of clean renewable fuels, energy efficiency, and greenhouse gas capture (P.L. 110-140; 121 Stat. 1492). It required FERC to study, report, and develop a plan to manage energy demand in all fifty states; such a plan might include the use of smart grid technologies (P.L. 110-140; 121 Stat. 1664-1665, 1784; §§ 571 & 1302).

In 2008 the U.S. Supreme Court, in *Morgan Stanley Capital Group Inc. v. Public Utility District No. 1 of Snohomish County, Washington* [554 U.S. (2008)], addressed whether utilities could renegotiate contracts with power suppliers if electricity prices declined. FERC had not allowed renegotiation because it found that the higher rates in pre-existing contracts were not excessive burdens to consumers. The Court ruled that the Commission failed to prove the absence of excessive burdens on consumers due to higher rates. The Commission had operated under a legal presumption, known as *Mobile-Sierra* [350 U.S. 348 (1956)], that rates established in a long-term legal contract were by definition reasonable; the Court questioned this presumption because the contract in this case was signed under what respondents claimed to be market manipulation. Ultimately, the Court ruled that FERC needed to re-examine the case, looking again at whether the higher rates in the existing contract were excessive and whether the petitioners engaged in market manipulation.

Summary and Conclusion

This chapter has provided a comprehensive review of the events and factors that helped shape the federal regulation of private electric utilities between 1920 and 2008. Since the Federal Power Commission was the predecessor of the Federal Energy Regulatory Commission, discussion began by examining the influences on the regulatory behavior of the FPC, shifting

later in the chapter to FERC. I detailed federal legislation that set out the FPC's and FERC's powers and examined how those powers evolved over time. Included as well were U.S. Supreme Court decisions and executive orders that affected the regulatory jurisdiction of the Commission. To serve as a baseline for comparison and to provide additional clarity, discussion in chapter 5 begins with a description of the Commission's regulatory powers as they stood just prior to its reorganization into FERC in 1977, using elements from both the U.S. Code and the Code of Federal Regulations.

This chapter highlighted several features of the private electric utility industry and its regulation. A recurring theme emanates from both state and federal regulation. Although state and federal governments likely had some influence on the stability of utilities between the 1940s and 1965, these governments also seemed to play a role in the negative outcomes that utilities and utility consumers later experienced. Indeed one might argue that state and federal government activities were responsible for at least some of the problems. Examples include the creation of public utility holding companies, which caused significant difficulties for the industry, consumers, and governments, encouraged by state regulation of the industry, and the related phenomena of cascading power failures and growing questions over regulatory jurisdiction produced at least in part by federal regulation. One senses that state and federal policymakers frequently were groping in the dark in this issue area when they crafted the regulatory regimes for private electric utilities that often created as many problems as they fixed. Much of the invective directed at the FPC by Landis, the Supreme Court, and Congress was related to how the Commission exercised its regulatory jurisdiction under the Natural Gas Act of 1938, which relates to electric utilities in cases where such utilities fuel their power plants with natural gas. More recently, FERC has been criticized for how it exercised its regulatory jurisdiction over electric utilities, as one saw during the California electricity crisis and in *Morgan Stanley*. FERC also has been consistently criticized for administrative problems. The result has been the establishment of an energy-based regulatory regime at the state and federal levels that appears as largely ineffective, confusing, and in some cases incompetent. Chapter 4 suggests why this is the case as I lay out the conceptual framework and research design for the study.

Chapter 4

Conceptual Framework and Research Design

Based on the history of electricity regulation in the U.S. and available scholarship, what are the most persuasive explanations for changes in the Federal Energy Regulatory Commission's regulatory approach toward private electric utilities between October 1, 1977, and December 31, 2006? The answer may well lie with Congress, how it responded to crisis, and how FERC responded to Congress.⁷² To explore the extent to which crisis, congressional response, and the Agency's responses are responsible for the Commission's regulatory changes, this chapter introduces the conceptual framework and the research design I employed.

Discussion begins with how I identified a crisis or crises and then shifts to an explanation of why crisis is important and how Congress typically prefers to respond. Next is a brief exploration of why Congress tends to avoid passing legislation related to private electric utility regulation unless legislators believe there is some pressing need. Then, I examine the type of legislation (substantive versus procedural) Congress usually adopts in response to a utility-related crisis and how the type of legislation affects the private electric utility regulatory system. Moreover, this chapter highlights the importance of institutional structure in both Congress and FERC and how those structures limit and shape how each organization responds to crises. Process and punctuated equilibrium theories are introduced as ways of conceiving the crisis-response relationship. Finally, this chapter draws together the conceptual framework and the methods used to examine how and why the congressional response to crisis is the primary causal mechanism driving regulatory changes for private electric utilities at FERC.

Conceptual Framework

Crisis Identification

I identified the crises by reviewing academic literature, Commission documents, and congressional materials looking for events or periods of time those sources labelled as "crises." Since a real or a perceived crisis must exist at least in the minds of some of the regulatory participants, the sources provided some indication of whether the public, FERC, or Congress perceived the existence of an electric utility-related crisis. Additionally, financial statistics for

⁷² As an independent regulatory commission FERC arguably is more attuned to what Congress wants than an executive branch agency under the same circumstances.

utilities like electricity rates, debt-to-equity ratios, net operating incomes, and bond ratings were used to signal the existence of an actual crisis. Such crises often were associated with higher electricity and petroleum prices or electricity blackouts and frequently were accompanied by a corresponding decline in debt-to-equity ratios, a decrease in net operating incomes, and deterioration in bond ratings for utilities.

Why Crisis Matters

A careful historical review of congressional policy making for the private electric utility industry reveals a clear pattern. Congress usually does not engage in formal policy making in this issue area unless there is a crisis of sufficient size and scope to create the need for new policy.⁷³ When Congress does act, its efforts may result in a new policy as much as a decade after the first apparent crisis occurs (e.g., passage of the Department of Energy Organization Act of 1977). Undoubtedly, part of the reason Congress responds the way it does to a crisis involving private electric utilities relates to its institutional structure. As Olympia Snowe (1989) reminds us, the founders designed Congress to promote debate and public input, not to make quick, conclusive decisions. This may be why Congress often defers and gives a significant amount of discretion to the executive branch in the immediate aftermath of a crisis⁷⁴; over time as the crisis fades Congress frequently adopts legislation, scaling back the discretionary powers it initially gave the executive branch⁷⁵ (Crotty, 2003). Of course, if a crisis is severe enough, it may require an immediate response. At least one study (Hale, Hale, & Dulek, 2006) found that

⁷³ Sometimes multiple crises must occur involving the same issue (e.g., blackouts) before Congress acts. Note as well that the presence of a crisis does not necessarily mean that Congress will act. Instead, Congress often waits as long as it can before it acts. By the time Congress does act it seeks political cover by giving citizens the sense that legislators are doing something to address the problems, even if the response amounts to little more than a “public policy placebo.” Depending on the nature of the focal event or situation, a “crisis” may be identified by members of Congress, the public, or FERC.

⁷⁴ This may explain in part why Congress decided to place FERC within the Department of Energy (DOE) when the Commission was reorganized in 1977. As already mentioned, placing FERC in DOE also gave Congress political cover if things went wrong, allowing legislators to blame the president and DOE for failures at FERC.

⁷⁵ The federal courts also tend to give executive branch agencies more latitude to operate in the immediate aftermath of a crisis, but as the crisis fades they too begin to issue decisions scaling back the power.

even the wrong action taken immediately is usually better at mitigating and recovering from the impact of a crisis than the right action taken too late (p. 313). It is simply easier for an executive to act under this kind of time pressure than it is for a legislature. Instead, Congress's institutional design means it is better at investigating a crisis after it happens, critiquing the responses of the president and of the agencies involved, and passing legislation to address and correct particular elements associated with the initial crisis.

Scholars also have considered Congress's unwillingness to create new policies in this issue area for reasons that go beyond institutional design. Considered together, Axelrod (1982) and Gormley (1986) produced findings that help in explaining such legislative reluctance. Because the policy environment for private electric utilities is so ambiguous, complex, and contentious, members of Congress prefer that bureaucrats make most of the difficult decisions. Members of Congress usually do not attempt to pass legislation addressing issues related to private utilities unless there is a "crisis" and constituents demand that they do something to fix the problem.⁷⁶ Even in response to a crisis,⁷⁷ Congress often prefers to adopt incremental and procedural rather than comprehensive and substantive legislation (Axelrod, 1982; Gormley, 1986). Part of this tendency may stem from information asymmetry problems as most members lack the expertise to make competent decisions about how private utilities should be regulated⁷⁸ (Axelrod, 1982). Another reason may be members' desire to avoid angering important political constituencies regardless of what policy choice is made (Gormley, 1986).

Information asymmetry, the need to placate conflicting constituencies, and the perceived need to act quickly may explain why legislation passed during times of crisis usually is not well thought out and may lead to additional problems in the regulatory system. Procedural policy

⁷⁶ This point highlights why changes in private electric utility regulation occur in fits and starts. Snowe (1989) observes that the legislative process may not start unless a problem arises. Also, this congressional crisis-response approach may be reflected in part by members' preference for fire-alarm oversight (McCubbins & Schwartz, 1984).

⁷⁷ As chapter 3 showed, there usually is a lag between the outbreak of utility-related crisis and a congressional response.

⁷⁸ Legislators may recognize that their lack of expertise in the past has created problems for both FERC and the system designed to regulate private electric utilities. Such recognition might explain why members often appear to be groping in the dark in this issue area and their reticence to create new policies that may result in more problems.

changes often result in regulatory overlap or underlap as new actors and devices are added to the existing system. Rather than serving as the basis of a new regulatory arrangement that would replace the existing regime, the additions end up in competition and sometimes conflict with existing regulatory elements (Gormley, 1986). Complexity is added as each time there is a crisis new interests are able to enter the hybrid network,⁷⁹ making consensus nearly impossible as each interest fights for influence over regulatory decision-making (Axelrod, 1982). In this context Congress expects bureaucrats at federal agencies, more particularly FERC, to address regulatory issues related to private utilities; if they fail, the bureaucrats and the agencies will be blamed and possibly sanctioned.⁸⁰

Congress, due in part to institutional design and politics, clearly prefers to defer to federal agencies in the immediate aftermath of a crisis and then to act in retrospect. Meanwhile, federal independent regulatory commissions seem similarly ill-suited to act in the immediate aftermath of a crisis. Perhaps, one should not be surprised by the inability of commissions to react to a crisis as they are designed in some ways to resemble small legislatures. Volner (1976) reported that by the early 1970s public perceptions grew that the commissions were costly, ineffective, slothful, and generally ignored due process and the public interest (p. 285).⁸¹ To some extent, this perception may have been produced by some of the mechanisms Congress put in place to address Constitutional questions (see Rohr, 1986; Volner, 1976) raised by the existence and operation of the independent regulatory commissions themselves. As Lewis (2003) notes, conceptually the strength of the commission structure results from the political insulation from

⁷⁹ I use the terms “regulatory mosaic” and “hybrid network” interchangeably to refer to a system in which numerous actors influence how utilities are regulated. As chapter 2 mentioned, the entrance of new interests and regulators into the hybrid network has the benefit of preventing regulatory capture, and they can serve as a check on the power of other actors involved in the network.

⁸⁰ These sanctions can come in the form of agency budget cuts, committee hearings, and new legislation; in some cases they can result in the elimination of an agency, as occurred with the Federal Power Commission in 1977 (Fremeth & Holburn, 2012, p. 137; McCubbins, 1985, p. 728).

⁸¹ Similar complaints were made specifically about the Federal Power Commission (see chapter 3). Although this may or may not still be the perception of commissions generally, it does help explain why the FPC was reorganized into FERC.

presidential administrations it provides to regulators, allowing for continuity in policy administration to some extent protected from the vagaries of election results (pp. 3, 21-22). Even so, when Congress designs the structure and authority of commissions, it must keep a delicate balance between providing some insulation from elected officials and acknowledging the need for public accountability. So, on one hand Congress has granted commissions broad delegations of regulatory authority, but on the other it has sought to check the commissions' power by placing them into broader regulatory frameworks defined by regulatory underlap and overlap. Congress has sought to constrain the commissions further by giving executive branch officials the ability to oversee the commissions in certain circumstances⁸² and by requiring the commissions to follow the processes and procedures established under the Administrative Procedure Act of 1946 (P.L. 79-404; 60 Stat. 237; Volner, 1976, pp. 298-299). Finally, of course, federal courts can check commission decisions.

Essentially, then, federal commissions operate within a well-recognized set of acceptable approaches to regulation. It is difficult, however, to see how such rule-bound organizations could possibly be nimble enough to respond to a crisis effectively. In the late 1970s Congress clearly determined the Federal Power Commission could not so respond. Like Congress, the federal commissions are not designed institutionally to excel at crisis response. This may help explain why many considered the commissions to have failed (Volner, 1976) in response to the challenges of the 1970s, requiring either substantive reform or outright abolition. Instead, the commissions seem better suited for the implementation of basic regulatory functions like the issuance of licenses where they have the time to follow acceptable regulatory procedures.

Operating in a Hybrid Network

Once Congress responds to a crises involving electricity, it then is up to administrators at FERC to determine how to implement those decisions. In the process of developing an implementation strategy FERC administrators must consider several crucial factors. First, they must stay within the boundaries of what Congress wants. Congress can establish those boundaries by passing legislation, making informal requests to the Agency,⁸³ increasing or

⁸² This was particularly the case for FERC, lodged within the U.S. Department of Energy.

⁸³ Such requests can occur at hearings where members ask agency administrators to respond to problems, in letters, through telephone conversations, and through other forms of personal contact.

decreasing agency budgets, and increasing or decreasing staff size. Such actions provide cues to FERC about how it should regulate private electric utilities.

A second factor that FERC must consider when developing or refining an implementation strategy to regulate private electric utilities is the larger regulatory network in which it is embedded. These arrangements include a plethora of local, state, and federal regulatory agencies scattered throughout the country, with which FERC shares authority. Some of those entities include the Securities and Exchange Commission (SEC), the U.S. Department of Energy (DOE), the U.S. Commodity Futures Trading Commission (CFTC), and state public utility commissions (PUCs); other local, state, and federal agencies also may be involved in certain circumstances (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Oversight and Investigations, 2008; McGrew, 2009; Congressional Research Service, 1991). Beyond governmental regulatory actors, the regulatory network also contains private electric utilities, interest groups (including environmental, consumer, and utility industry interests), small power producers, cogenerators and non-profit regulators.

It also is important to recall that both existing regulatory arrangements for private utilities in Table 1 are highly interdependent on a number of actors to achieve policy success.⁸⁴ This interdependence suggests that if profound disagreements occur among the different entities they may well result in regulatory failure. One source of failure might be that different agencies with overlapping jurisdictions decide to adopt inconsistent regulatory standards that end up being detrimental to the public interest (Volner, 1976, p. 294). Another potential source of failure might involve one agency shirking its regulatory responsibility and deferring to another agency with which it shares regulatory responsibility over a particular policy matter (p. 295). Regulatory underlap also is likely to produce failure if no entity takes appropriate measures to fill a regulatory void or if attempts at formal or informal regulatory coordination are ineffective (p. 298).

As a result, FERC cannot change how it regulates private electric utilities without getting other network actors to accept the new approach through either formal or informal mechanisms. Such mechanisms then could be used to establish more consistent regulatory standards between

⁸⁴ Even though the newer regulatory system seeks to limit the influence of state-level actors, it still relies upon the successful interaction of federal elected officials, federal agencies, non-profit entities, private electricity producers, and private electric utilities.

and among regulatory actors and to encourage their participation throughout the entire regulatory process.

Theoretically, then, FERC operates in what Hult and Walcott (1990) would describe as a “hybrid network” where the policy environment is characterized by ambiguities, conflicting values, incrementalism, conflicts between agencies, regulatory fragmentation, complexity, and “operating room politics” (Axelrod, 1982; Gormley, 1983, 1986). The network has evolved over time in response to both congressional and agency actions and happenstance. The network is composed of a variety of interested actors including government agencies, interest groups, small power producers, cogenerators, utilities, and non-profit regulators that often disagree over the proper regulatory approach for utilities. Due to regulatory fragmentation and the sheer number of actors involved, jurisdictional issues (e.g., the interstate distribution of electricity) abound that are often resolved by bargaining among the interested actors, since Congress has not always provided clear jurisdictional boundaries among the regulatory entities (Axelrod, 1982; Volner, 1976).

Applying Process and Punctuated Equilibrium Theories

Since FERC was created in 1977, a repeating process has unfolded in which crises have occurred involving private electric utilities, public pressure eventually pushes Congress to act, and FERC then changes its regulatory approach to the utilities. In some policy arenas (e.g., national defense), Congress tends to act more proactively, creating policies to address issues during periods of both stability and crisis. In private electric utility regulation and policy arenas like it (e.g., power plant siting, hazardous waste regulation, and nuclear licensing), however, where Congress engages in fire-alarm oversight due to the contentiousness and complexity of the policy environments, a process of crisis and legislative response is typical (cf. Gormley, 1986, p. 600). In such policy environments Congress generally limits its formal policymaking efforts to crisis response. For utilities this has meant legislative responses to several small crises at once or to one major crisis driven by constituent demands to act.

To explore the study’s central concern with congressional influence on FERC’s regulatory changes toward private electric utilities, I applied an approach informed by process theory (see, e.g., Pierson, 2000). Such theory can be used to help trace how and why FERC changed its regulatory approach toward private electric utilities from crisis to crisis. Process notions are appropriate in this case because Congress and FERC seem to be engaged in an

ongoing relationship in which the former responds to crises and then the latter responds to Congress. This process has resulted in the emergence and maintenance of the two different regulatory approaches to private utilities introduced in chapter 1.

In process theory the timing and sequence of events matter because events often serve both as limiting factors on future policy choices and as influences on outcomes (Kay, 2005; Langley, 2009; Pierson, 2004). In the case of private electric utility regulation, for example, state governments regulated private electric utilities first; because of that they view the industry as their regulatory turf and have been loath to cede their powers to the federal government (Joskow, 2005b). This places FERC in a difficult position as a federal regulator because the states view it with suspicion.

Additionally, regardless of their perceived importance events can have significant consequences (Pierson, 2000). In the case of private electric utility regulation events clearly have mattered. Some energy-related problems resulted, for example, in the reorganization of the FPC into the FERC. Another illustration occurred after the California electricity crisis, as many other states reconsidered their support for wholesale electricity market restructuring. This reinforces another point of some process theories: future policy choices often are limited by past choices as successes are likely to encourage adherence to a particular policy because of positive feedback. Failure is likely to trigger a new policy approach when the failure is of sufficient size and scope to overcome “lock-in” to the previous approach (Pierson, 2000, 2004).

This also highlights the central concepts associated with punctuated equilibrium theories in which periods of stability and policy incrementalism are interrupted by short bursts of dramatic change triggered by failure (“crises”; Baumgartner & Jones, 1993; Gould, 1985), with the crises serving as punctuations. This evidently has resulted over time in the establishment of a new equilibrium through congressional actions and FERC’s responses, characterized by ongoing variations in the nature and extent of wholesale electricity competition among the states (Baumgartner & Jones, 1993, p. 10).

Elements of the federal effort to create the post-1968 regulatory approaches to private utilities might be described as instances of path dependence. For example, some states might have resisted the newer system because they were locked-in to features of the older system that they were unwilling to give up. Although path dependence probably has some merit as federal policy generally has shifted toward market restructuring, movement toward the new arrangement

has not been uniform or linear. Partisan and regional politics and other factors like uncertainty for policymakers, illegal activities by market participants, financial difficulties for utilities, and electricity rates have mitigated the move toward the newer approach, contributing to the persistence of the two arrangements.

Part of the difficulty of applying path dependency more broadly to this case also stems from the observation that it is an empirical category rather than a theory (Kay, 2005). Instead of following an inevitable path, Congress seems to have engaged in a sort of meandering incrementalism without a grand plan or vision, responding to crises on a case-by-case basis using fire-alarm oversight. This sort of response can be explained in part by a shift in tone toward private electric utilities beginning in the mid-1960s due to crises, leading to the disintegration of the New Deal era policy monopoly (Baumgartner & Jones, 1993), as an expanded set of actors⁸⁵ began to influence how the industry was regulated. One can argue that Congress opened the regulatory process up to many interests and added many regulatory actors to avoid any interest from gaining too much influence over regulatory outcomes; this in turn led the entire regulatory system to become so unwieldy that it is difficult to manage. Such an approach may make sense to legislators as a way to address problems in an issue area fraught with high levels of hostility (Gormley, 1986), but it also has produced policy fragmentation, stove-piping, and policy conflicts among different agencies, interests, and levels of government.

Conceptual Applications

In the broadest sense, this study examined whether, how, and why FERC changed its regulatory approach to private electric utilities between 1977 and 2006. I contend that it has changed and that the genesis of such changes has been Congress's responses to crises. Such crises generally have fallen into three categories: (1) damage to the physical environment, brought about by the activities of private electric utilities; (2) economic, triggered by rising oil prices⁸⁶; and (3) reliability, produced by large and relatively long-lasting power outages or blackouts. The study examines four crises (the periods of stagflation 1977-1982, rising oil prices

⁸⁵ This larger set includes non-profit regulators, state and federal environmental agencies, and interest groups. Some of these actors, particularly government agencies, entered the network through explicit government actions, while others, especially interest groups, were able to gain access to the network during times of crisis (Axelrod, 1982, p. 154).

⁸⁶ See Figure 7.

in 1990 due to the Gulf War, the California electricity crisis 2000-2003, and the Northeast blackout of 2003), Congress's responses to them, and how FERC reacted to these legislative responses. It seeks to explain why at some points between 1977 and 2006 Congress strongly encouraged private utilities and state governments to opt for features of the newer regulatory approach, while at other times private utilities and state governments had more leeway to operate at least partially under the older regulatory arrangements.

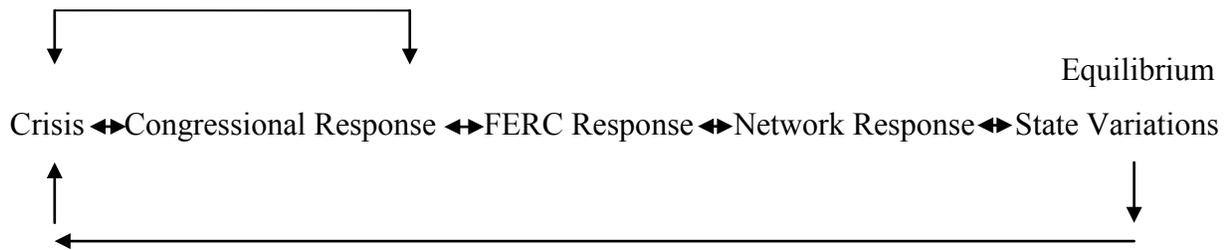
To examine how and why FERC changed its regulatory approach for private electric utilities several times from 1977 to 2006, one must consider congressional and other influences on the decision-making abilities of those working at the Agency. Meanwhile, process theory suggests the importance of examining when crises occur and the possibility that crises can have significant consequences. I contend that Congress tends to push harder for fuller implementation of features of the new regulatory model right after a crisis, while it gives more leeway to state governments and private utilities in times of greater perceived calm, as one might expect based upon notions of punctuated equilibrium (Baumgartner & Jones, 1993; Gould, 1985).

Key Causal Mechanism: Processes are made up of interconnected events and actions that take place at different points in time. Efforts to fashion process-based explanations involve identifying the mechanisms that link events to actions (Vayda, McCay, & Eghenter, 1991). An historical review of private electric utility regulation indicates that the existence of a crisis or a perceived crisis has led to and reinforced the existence of two regulatory approaches comprised of differing features for private utilities and state governments, since Congress has been reluctant to select one completely over the other. These crises provide incentives to members of Congress to act, as they feel the need to respond to public pressure demanding a federal response.

The congressional response to crises -- a crisis-response relationship -- serves as the primary causal mechanism driving how and why FERC changed its regulatory approach for private electric utilities several times from 1977 through 2006 (see Figure 10). In turn FERC's changes reflected and contributed to the existence of two regulatory approaches to private electric utilities and the states. Theoretically, crises serve as punctuating or focusing events, and legislative responses result in changes by FERC that establish a new equilibrium for utilities and state governments somewhere between the two regulatory arrangements as ongoing variations occur in the nature and extent of wholesale electricity competition among the states. During eras of perceived calm FERC tends to make small incremental regulatory changes, while ongoing

variations among the states result from state-level regulatory changes or from changes happening in the electric utility industry itself.⁸⁷ The connections among events and actions occur as the crisis-response relationship repeats: a crisis results in a legislative response and the response changes how FERC regulates private utilities, producing a new equilibrium for utilities and states. When the next crisis or crises develop the crisis-response relationship repeats, resulting in another new regulatory equilibrium for utilities and state governments;

Figure 10: Crisis-Response Relationships – also in appendix



Finally, it is important to recognize that feedback occurs throughout the entire process, and it flows in both directions, shaping the equilibrium and the crises. Those involved include the public, Congress, FERC, and other actors in the hybrid network. The public provides input to Congress through letters, telephone calls, emails, tweets, and town hall meetings in response to a crisis, prompting Congress to act. Congress responds through, for example, hearings, constituent communications, and the passage of legislation. Congress communicates with FERC through proposed and enacted legislation, hearings, and formal (e.g., official letters) and informal (e.g., telephone calls, text messages, and emails) communications. In turn FERC provides feedback to Congress by drafting legislation and through oral and written testimony. The public and FERC provide feedback to each other through public hearings when FERC considers the development and implementation of a new rule or order. Similarly, other members of the hybrid network use similar methods to provide and to receive feedback from other actors.

I am not suggesting, however, that the rolling decision process involving FERC always occurs in the aftermath of a crisis; nor am I claiming that the relationships in Figure 10 always

⁸⁷ Here, punctuated equilibrium ideas help explain the congressional response to crisis and FERC’s reaction to congressional actions. They also explain why absent a crisis and a congressional response FERC tends to make incremental changes. Such ideas need not account for ongoing variations among the states.

are linear. Instead, I argue that the rolling decision making process tends to occur after a crisis of a particular type, size, and scope, which produces varying kinds of relationships.

My focus is on the cases where FERC changed its regulatory approach to private electric utilities the most, and those cases seem likely to involve a rolling decision making process. I note other instances that do not manifest such a decision making process. In exploring the operation of the crisis-response mechanism, I expected that the nature of specific crises shaped FERC's regulatory approach toward private electric utilities. The type, size, and scope of a crisis or crises help explain if, when and how Congress responds.

One *type* of crisis – which might be labeled a “regulatory” crisis – occurs when it is limited to government agencies or particular levels of government. An example occurred after *Ohio Power Co. v. FERC* [954 F.2d 779 (D.C. Cir.), *cert. denied*, 113 S. Ct. 483 (1992)], which held that only the SEC could regulate utility holding companies. Yet the SEC was unprepared to take on such a task, while the Court prevented FERC from fulfilling the mission for which it was designed. Neither agency was happy with the decision. Both agreed that FERC should regulate electricity rates for utility holding companies and requested congressional action for more than a decade to fix the problems the decision identified.

Another type of crisis (a “constituency” crisis) directly affects important congressional constituencies. An example of such a crisis is a blackout caused by the failure of electrical equipment unrelated to regulatory practices; such cases happen frequently when people lose power due to extreme weather events like strong thunderstorms or a hurricane.

It is possible for a crisis to be both a regulatory crisis and a constituency crisis. The California electricity crisis was such an example: it involved regulatory problems at both the state and federal levels, and it affected electricity services and rates for consumers throughout much of the state. A constituency crisis might be expected to make Congress or state legislatures (as in the case of California) more likely to act and to act faster than in solely a regulatory crisis because a constituency crisis typically affects more voters.

The *size* of a crisis also may be important. The broader the impact of a crisis the more people it affects, the more likely and the more quickly Congress would be expected to act.

Finally, the *scope* or duration of a crisis likely is relevant. One would expect Congress to act more frequently the longer a crisis persists as the length of a crisis animated more voters to demand a response.

Once Congress decides to act, it has several tools at its disposal. It can pass legislation,⁸⁸ hold hearings, ask administrators to address the problem, request that the industry solve the problem, increase or decrease the budget of an agency, or change the staff size of an agency. Congress also may decide to use a combination of tools at the same time for one or more agencies, other levels of government, and several different organizations to address the crisis. It also can create new agencies through legislation, or it can eliminate agencies that have not responded adequately to the problems.

These congressional responses can be classified as incremental, procedural, comprehensive, or substantive. An *incremental* congressional response occurs when a series of small changes are made over time. A *procedural* response takes place when Congress decides to change how an agency or a regulatory system is structured, which can result, for example, in the creation of new agencies or the reorganization of an existing agency. A *comprehensive* response appears if, for example, Congress decided to make significant changes in how an agency or a regulatory system operates. Finally, a *substantive* response would occur if Congress decided to repeal an existing regulatory model and replace it with a new model.

I hypothesize that the contentious nature of the policy environment for private utilities also will help shape the nature of congressional responses. Congress will most likely rely mainly on incremental and procedural responses to address most private electric utility crises as it seeks to minimize diverse sources of opposition. Similarly, Congress will resort to comprehensive policy responses only in the case of large, longer lasting constituency crises. Due to the conflictual nature of the policy arena, it likely will avoid substantive responses to skirt or at least mitigate some of the potential political repercussions of creating new public policies for utilities. FERC's Response. After Congress identifies and reacts to a crisis, it then is up to FERC to figure out how it will implement any changes Congress mandates. If the Commission were the sole regulator of utilities, it could implement new rules and regulations after the notice and comment period for utilities and other interested actors. Yet the Agency exists in a hybrid network with many other regulatory actors with which it shares power. As a consequence FERC must not only consider the changes Congress wants but also determine what the other regulatory

⁸⁸ Such legislation might create a new agency, delegate more authority to existing agencies, or institute new requirements for the industry.

actors will accept before it implements regulatory changes. This requires a particular set of leadership and management⁸⁹ skills for those working at the Commission who must gain acceptance of, or at least a lack of opposition to, new proposed rules from other regulatory entities through bargaining. Leadership and management have shaped how the Agency has changed its efforts to regulate private utilities over time, constrained by bargaining with other regulatory actors in the hybrid network.

A series of internal factors also likely influence FERC's response. How the Agency decides to change regulatory elements for private utilities rests in part on the effectiveness of its capacity to cope with other actors in the hybrid network. Some of that effectiveness is influenced by whom the president nominates to serve as commissioners and appoints to fill the top management positions at the Agency. Congress also has a role to play in the effectiveness of the Agency by determining its staff and budget size as well as its statutory authority.

Expectations

In sum, I argue that FERC changed its regulatory approach to private electric utilities several times between 1977 and 2006 mainly because of congressional responses to crisis. Additionally, how FERC chose to change its approach toward private utilities was shaped by the hybrid network in which it operates as well as by internal factors influenced by the president and Congress. The congressional response to crisis varies with the type, size, and scope of the crisis and is constrained and enabled by the prevailing policy environment. Congressional responses may be incremental, procedural, comprehensive, or substantive, while FERC's leadership and management, staff size, budget, and the hybrid regulatory network also influence its response. It also is likely that FERC's responses provide feedback into the crisis-response relationship.

Research Design and Methodology

While the previous section provides a way to explain why the changes to private electric utility regulation occurred the way they did over time, this section describes how the research was done. Specifically, it justifies the boundaries of the study and the time period of the work, describes the selection of crises, includes a description of indicators, and provides a

⁸⁹ "Leadership" occurs as commissioners, office directors, and other high ranking officials at FERC guide other members of the hybrid network toward some acceptable regulatory change in light of a crisis. "Management" takes place when FERC staff direct the implementation of any newly agreed upon regulatory standards.

comprehensive list of data sources and methods employed. The section concludes by describing the ethical and political considerations and the limitations of the scholarship.

Boundaries

One major problem that occurs whenever electric utility regulation is examined is how to bound the study to make it doable. So many actors and issues are involved in the regulatory process that it is not possible to discuss all of them, even in a book length study. To overcome this problem, I was forced to make some difficult decisions. This study examines only private electric utilities; it focuses on the era 1977 through 2006; it emphasizes the energy-based regulatory structure for private electric utilities; and it examines whether, how, and why FERC changed its regulatory approach to private utilities after Congress responded to utility related crises.

Time Period

To provide a sense of the broader historical context, Chapter 3 discussed the origins of FERC's regulatory authority, beginning with creation of its predecessor, the Federal Power Commission, in 1920. The study's primary focus is the four crises (detailed below), tracing FERC's responses to congressional policy responses to each crisis that occurred between 1977 and 2006. This time span was selected because FERC began operating on October 1, 1977, and 2006 marked one year after the Energy Policy Act of 2005 was passed. Moreover, several years have passed since the end of 2006, providing a more complete and potentially more accurate record of the changes FERC made to the private electric utility regulatory system and why it made them.

Case Selection and Description

I began by looking at each crisis, then for indicators of a congressional reaction, and finally for responses from FERC to whatever Congress decided to do. The "crises" that I examined are the periods of stagflation 1977-1982, rising oil prices in 1990 due to the Gulf War, and the California electricity crisis 2000-2003 combined with the Northeast blackout of 2003. Most of FERC's regulatory changes for private utilities between 1977 and 2006 occurred in response to congressional policy making directed at alleviating those four problems.

To look for legislative responses to the four crises, I searched the United States Code and the Code of Federal Regulations (CFR) of 2008 for public law numbers, statutes at large identifiers, and federal register citations, as each section of the Code and the CFR reference the

sources of its authority. After listing identifiers from each section of the Code and the CFR in Excel spreadsheets, I examined each section of the CFR related to the four crises to highlight FERC's reactions to congressional responses to crisis.

I then looked at the specific statutes Congress passed to address these crises, including the Public Utility Regulatory Policies Act of 1978 (PURPA), the Energy Policy Act of 1992, and the Energy Policy Act of 2005. I also examined proposed legislative responses to these crises in order to trace whether and how FERC's regulatory approach may have changed in reaction to the proposed legislation. Hearings, resolutions, and member correspondence found in congressional reports also were reviewed to examine their potential relevance to how FERC regulates the utility industry. Then, to find out whether and how FERC changed its regulatory approach toward utilities, I examined orders, rules, regulations, and evidence of bargaining with other members of the hybrid network, using keyword searches in the Federal Register Index (Table 13). Finally, I examined whether and how Congress's actions influenced FERC and how the Agency went about changing utility regulations to comply with legislative dictates, seeking evidence of direct linkages between the crises and how and why FERC chose to change how it regulated the utilities.

Indicators

Indicators of a constituency crisis included electricity price spikes, power blackouts, and environmental problems (e.g., the Cuyahoga River Fire, Three Mile Island, and Love Canal) and were found through keyword searches in reports issued by FERC, in material produced and disseminated by the U.S. Energy Information Administration, in congressional hearings, and in proposed legislation. Meanwhile, evidence of a regulatory crisis included ineffectiveness,⁹⁰ regulatory gridlock, incompetence, management and leadership breakdowns, scandals, and violations of state or federal law.

Congressional responses were indicated by the adoption of a federal statute, proposed legislation, hearings, resolutions, and member correspondence with FERC requesting action. The type of congressional response (incremental, procedural, comprehensive, or substantive)

⁹⁰ Regulatory ineffectiveness and regulatory crises were exposed in government reports, press accounts, court cases, or academic studies; I identified such characterizations using keywords such as regulatory gridlock, incompetence, management and leadership breakdowns, scandals, and violations of state or federal law.

also was revealed in part by which response tool legislators decided to employ. Proposed legislation, hearings, resolutions, or member correspondence might well result in incremental regulatory changes, while a statute is required to produce procedural, comprehensive, or substantive changes. To determine the type of change a statute produced, I read the language to see if it reorganized the structure of an agency or a regulatory system (e.g., Department of Energy Organization Act of 1977), if it made comprehensive changes in how an agency or a regulatory system operated (e.g., Energy Policy Act of 2005), or if it repealed and replaced the existing regulatory approach (e.g., Public Utility Holding Company Act of 2005).

FERC reactions were tapped by the development and implementation of rules, regulations, and orders, bargaining between FERC and member(s) of the hybrid network, and other evidence that the Agency worked to remedy or to prevent problems from occurring.

Data Sources

Since this study focuses on FERC's regulatory changes, the Commission was a critical repository of primary source materials. Much of the material needed was found on and collected from the Agency's website. I began my search for information online in the Federal Energy Regulatory Commission website clicking on "About FERC" and then downloaded and printed budget amounts and total staff size information from "FERC Annual Reports" (1992-2008) and "Budget Requests and Appropriations" (2003-2008). Then, I went to the Agency's e-Library and did general searches at <http://elibrary.ferc.gov/idmws/search/fercgensearch.asp>.⁹¹ I searched each year of FERC's existence, beginning with October 1, 1977 to December 31, 1977, until December 31, 2006. Under "document type," I searched by "order/opinion," and from these results, I was able to download most of the orders FERC issued between 1977 and 2006, and a few of the opinions the Agency issued over the same period.⁹² I used a similar search process to

⁹¹ The "general search" function was selected because the "advanced search" function works best when docket numbers for specific documents are known ahead of time. When I started the research I did not know the docket numbers.

⁹² An "order" is a type of formal rule issued by FERC to address matters brought before it due to the passage of federal legislation or in response to some other issue or event; most rules and regulations are classified as orders. Opinions are written after the Commission hears a "judicial-like" case when one actor in the private electric utility industry challenges actions taken by another. Opinions can occur when there is an appeal of a decision made by an administrative law judge (ALJ) or an office director at FERC, or it can result from a case heard and decided solely by the Commission. Moreover, Commission opinions can be appealed, and in such cases

find financial information for the private electric utilities affected by the California electricity crisis.⁹³

To get the rest of the orders and opinions required the use of LexisNexis Academic, Westlaw Classic, and Westlaw Next online. Using the LexisNexis Academic “advanced search,” on the “browse sources” page, I clicked on “administrative materials & regulations,” then “decisions,” and finally scrolled through the sources until I found “Federal Energy Regulatory Commission Decisions.” On the FERC decisions page, I then did keyword searches (e.g., “Opinion No. 225” and “Order No. 555”) for the specific opinion numbers and order numbers that I had not found on the FERC website. Before leaving LexisNexis Academic and after discovering that I could not get access to the Commerce Clearing House (CCH) website⁹⁴ through the Virginia Tech library, I proceeded to download by quarter all FERC decisions that had docket numbers, using “Docket No.” as a search term. I also clicked on “US Legal,” selected “Federal & State Cases,” used “Federal Energy Regulatory Commission” as a search term limited to “party names,” selected the U.S. Supreme Court as the “jurisdiction,” and limited the search to October 1, 1977 through December 31, 2006.

Using Westlaw, I went directly to the FERC section of the database and downloaded the remaining orders and opinions. In an effort to verify that LexisNexis had all of the docketed material that I needed to examine, I did a keyword search in Westlaw using “Docket No.” as the

the Commission will issue an amended opinion either upholding its initial opinion or making whatever changes to the initial decision deemed appropriate. The opinions are similar to court opinions; however, unlike federal appellate courts, the Commission reserves the right to revisit and amend opinions it has issued in the past if it decides doing so is appropriate.

⁹³ In the FERC e-Library general search web page the date range for such information was 1999 to 2006; under document type and class “Report/Form” was selected; under type “Form 1 – Annual Rpt. For Major Electric Utilities” was selected; and the name of each utility was entered into the text search box with quotation marks around them to limit the search results.

⁹⁴ From October 1, 1977 through March 31, 2007, CCH had a contract with FERC to publish law books containing all of the pertinent legal information for the Commission on a quarterly basis. The legal information published in these books and contained online included all orders, opinions, ALJ decisions, FERC office director decisions, and other legal information. Virginia Tech does not provide access to these books or other online access. To compensate, I downloaded the materials from LexisNexis Academic by quarter, hoping that it would contain most of the docketed material contained in the CCH law books so I could keyword search those documents.

keyword and divided the searches up by quarters as I had done with LexisNexis. Unfortunately, discrepancies appeared between the two sources of up to about two dozen documents per quarter out of two or three thousand documents; in some cases LexisNexis had more documents than Westlaw and in other cases Westlaw had more documents than LexisNexis. Instead of downloading the Westlaw documents as well, I decided to use the LexisNexis documents. I acknowledge that the database probably does not contain every existing document but argue that it provides a fair representation of what occurred over the era that I studied. Finally, with the docketed materials, I developed both year-to-year percentages comparing the annual changes in the number of the same docket prefixes (Table 14) annually, and percentages comparing the number of different docket prefixes over the same year.

After downloading material from LexisNexis and Westlaw, I needed to verify that I had all of the orders and opinions FERC issued between 1977 and 2008. To get the information I needed, I visited several law libraries, including those at the Appalachian, University of Richmond, and Washington and Lee University schools of law. Each library had different parts of the CCH law book collection, allowing me to copy the entire index of FERC orders from 1977 through 2006 and the entire index of FERC opinions from 1977 to 2006.⁹⁵

Furthermore, I examined relevant parts of the U.S. Code. Using the U.S. Government Printing Office's "federal digital system," I downloaded Title 16, Chapter 12; Title 15, Chapter 15B; Title 15, Chapter 60; appropriate sections of Title 33; appropriate sections of Title 42; and appropriate sections of Title 49. The downloaded material includes all of the sections of the U.S. Code that affect FERC, which I verified with McGrew (2009). Federal budget information came from McConnell Library at Radford University for 1977 to 1995 and the Office of Management and Budget (OMB) website from 1996 through 2008. I also downloaded Title 18 of the Code of Federal Regulations (CFR) from 2008 and assembled the relevant federal regulation citations by date.

Using the "Hein Online" database, I gathered every statute cited in the U.S. Code that pertains to FERC and private electric utility regulation. Turning to the yearly indexes in the Federal Register Library I collected the final rules listed for FERC for each year of the study. I collected similar materials for the Federal Power Commission, including the transfer of functions

⁹⁵ Unfortunately, there were too many pages to copy the entire set to use for keyword searches.

from the FPC to FERC. Finally, I identified in the U.S. Supreme Court Library all cases involving FERC and the FPC.

In an effort to gain a broader understanding of how the private electric utility industry and FERC performed over time, I began with materials on the U.S. Energy Information Administration (EIA) website. First, I downloaded a map showing electricity market restructuring by state (U.S. Energy Information Administration, 2010; see Figure 6), and a posted list of important U.S. Supreme Court cases for the electric utility industry (U.S. Energy Information Administration, 2000). A better sense of how electricity prices may have been affected by crises over time appears in material downloaded from the U.S. Energy Information Administration showing the average price of electricity by customer type and both nominal and real rates (e.g., residential, commercial, industrial, and transportation) from 1960 to 2011 (see Table 4, Figures 8 and 9 in the Appendix; 2012). To compare utility performance with the price of oil Figure 7 shows the nominal and real price of imported crude oil projected to 2016 (U.S. Energy Information Administration, 2013b). Other measures of private electric utility performance, including net electric operating income, debt-to-equity⁹⁶ data, and bond ratings, came as well from the U.S. Energy Information Administration (1984, pp. 8-9; 18-20; 1989, pp. 15-17; 1991, pp. 3, 17, & 590; 1996b, p. 555). Moreover, the Administration provided some of the debt-to-equity and the net operating income material in annual reports (U.S. Energy Information Administration, 1996, p. 31; 2002, p. 35; 2011, p. 68; 1995, p. 29; 2003, p. 50).

Other useful materials on private electric utility regulation were collected from the U.S. General Accountability Office website. To track the number and subject of bills related to FERC, I relied on the Thomas website managed by the Library of Congress.

Meanwhile, to gain a better understanding of what Congress thought about FERC at any given time, I used the Hathi Digital Trust Library to identify congressional hearings involving the Agency. I opened all of the congressional hearings that appeared when searching for “FERC” for the designated years and skimmed them to see if a hearing dealt with FERC’s efforts to regulate private electric utilities. This process also produced several relevant GAO, Office of Technology Assessment, and Congressional Research Service documents reporting the results of studies related to the electric grid and FERC’s regulation of it.

⁹⁶ Debt-to-Equity Ratio = debt ratio $[(d+s)/c+d]$ / equity ratio $[(c-s)/c+d]$, where c= total proprietary capital; d= total long term debt; s= preferred stock

The Hathi search was supplemented with a keyword search on Addison on the Virginia Tech Library website. A search using “United States. Federal Energy Regulatory Commission” returned nearly 400 results, some of which had not appeared in the Hathi search. These results led me to paper copies of congressional hearings at the library as well as others through interlibrary loan. Newman Library also provided access to FERC’s annual reports (1977 to 1991) that were not available electronically. In the meantime, I searched databases on the Virginia Tech online library website (including Google Scholar, Web of Knowledge, ProQuest Congressional, Congressional Research Service Reports from CQ Press, and ABI/Inform from ProQuest) using “Federal Energy Regulatory Commission,” “cogeneration,” “qualifying facility,” “small power producer,” and “regional electric reliability councils” among other search terms⁹⁷ to find articles in academic journals.

Finally, I visited several other libraries to collect additional information on FERC. Among them were the National Archives II in College Park, Maryland, and Alderman Library at the University of Virginia.

Ethical and Political Considerations

Private electric utility regulation is a controversial policy arena fraught with complexity and conflict. Throughout my research, I have taken care not to misinterpret any of the materials I found. I have confirmed findings in multiple sources through triangulation before reporting them. Also, I have reported contradictory data and attempted to find or suggest potential explanations for the contradictions.

Limitations

Every study has limitations. First, each researcher brings their own perspectives and experiences that inform and color their approach to any research question. I am unabashedly pro-electricity and share Bryce’s (2010) affinity for cold beer and air conditioning. This does not mean that I lack concern for environmental impact, but I tend to balance environmental concerns with the need of people to have access to electricity.

Another limitation of this study is that past legislative and regulatory decisions often are products of back room bargaining largely invisible to the general public or scholars, meaning these decisions may be something that I cannot account for in this study.

⁹⁷ See Table 13 for a complete list of search terms used.

Moreover, I would have more confidence that the findings were more complete if I had been able to gain online access to the CCH database for FERC. I compensated for the lack of access by getting copies of the order and opinion indexes from law libraries, ensuring that I downloaded all of the industry-wide orders and opinions issued by the Commission between 1977 and 2008. Orders and opinions are important because they represent Commission-level decision making rather than lower level agency decision making that may or may not reflect the views of the Commission.⁹⁸ Much of the material found within the CCH also should be found in the docketed material that I downloaded from LexisNexis Academic, so I have at least some of the material found in the CCH but cannot guarantee that I have all of it.

Summary

This chapter explored the conceptual framework, research design, and research methods of the study. The conceptual framework centers on crisis, the congressional response to crisis, and FERC's subsequent response to Congress. Legislative responses to crises are shaped by partisan and institutional factors as well as by knowledge problems best understood as instances of information asymmetry. In turn, FERC's responses are constrained by Congress, various interests, and other actors involved in the private electric utility regulatory network. Throughout the entire response process, feedback loops among the various actors shape the characterization of a crisis and any resulting crisis response.

To get a better sense of the crisis-response process, I selected a specific date range (1977-2006), identified crisis indicators to identify when a crisis occurs, highlighted my approach and the procedures I used in the study, and described its limitations. Chapters 5 through 7 report the findings.

⁹⁸ For example, when an ALJ makes a decision and the Commission overturns it on appeal, clearly the ALJ decision did not represent the views of the Commission on the topic in question.

Chapter 5

Stagflation and the Energy Crisis, 1975 to 1982

High energy costs in part drove stagflation, and high oil and natural gas prices contributed to higher electricity prices. To understand just how profound the impact of the crisis and the subsequent public policy response was, it is useful to examine the issues associated with private electric utilities just prior to the creation of FERC, through the start of its operation in 1977, to the end of stagflation in 1982, and into the period after stagflation ended between 1983 and 1986. The crisis and the policy responses would ripple throughout society and would influence modern American politics for more than a generation, and they would shape how Congress responded to future perceived and actual electric utility-related crises.

As the previous chapter discussed, I contend that for a variety of reasons Congress does not engage in public policymaking for private electric utilities unless a crisis pushes it to act. At the same time, once created FERC was required to navigate a complex regulatory environment structured by both formal congressional policymaking and happenstance. This chapter presents evidence of congressional responses to the stagflation crisis and of FERC's responses to Congress. Additionally, I will examine the role of feedback in the crisis-response relationship. The chapter summarizes the depth of the crisis, describes the policy environment at the time, highlights the legislative responses, and explores FERC's responses and those from some of the other actors in the policy network. It also discusses the consequences, the ongoing variations in the nature and extent of wholesale electricity competition among the states that the public policy changes created.

Regulation Prior to FERC

Depth of the Crisis and the Policy Environment: 1970 – 1977

The period of economic stagflation occurred in the U.S. from 1970 to 1982; I am most concerned with the years 1977 through 1982 since FERC did not begin operating until October 1, 1977. Electric utilities were major contributors to stagflation: the average nominal retail rate of electricity doubled between 1970 and 1977, and the average real retail rate increased by more than 28% over the same period (U.S. Energy Information Administration, 2012; Table 4 in the Appendix). One of the causes of electric rate hikes was the OPEC oil embargo; the largest year-to-year rate increase occurred between 1973 and 1974 when more than ten percent of electric

utilities were fueled by oil (Gormley, 1983, p. 11).⁹⁹ The cost of fuel for power plants went up so rapidly that the states responded by establishing automatic rate adjustment clauses that utilities could use to raise or lower electricity rates as fuel costs changed without approval from the state public utility commissions (Joskow & MacAvoy, 1975, p. 297). However, state PUCs developed more restrictive regulatory processes for increases as inflation grew (p. 296), and it became more difficult for private utilities to get rate increases; when increases did occur they did not always generate enough revenue to offset inflation (p. 297). Such restrictions likely responded to growing public opposition to higher retail rates (Congressional Research Service, 1977a, p. 14).

Retail electricity rates also were directly impacted by wholesale activities regulated by the Federal Power Commission. Under the terms of the Federal Power Act, private utilities in pending cases could charge higher rates until the FPC ruled on whether the higher rates were appropriate (P.L. 74-333; 49 Stat. 851-852; § 213; § 205).¹⁰⁰ If the higher rates were not approved, however, the utility had to refund the amount overcharged. When wholesale rates went up, it put pressure on the states to also raise the retail rates, or utilities would face tightening profit margins and possible insolvency (Joskow & MacAvoy, 1975). Private utilities could avoid the wholesale rate issue by generating all of the electricity they needed themselves. Utilities could further mitigate generation costs through the use of coal or hydroelectric power as a fuel source (Gormley, 1983, p. 55; U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Oversight and Investigations, 1975).

The large and growing problems of wholesale and retail rates also included reliability, technology, power plant siting, and environmental concerns. Reliability became a major concern after the Northeast blackout of 1965 and the New York City blackout of 1977 (Congressional Research Service, 1977a, p. 39). The costs associated with such blackouts became too high to

⁹⁹ Between 1973 and 1974 nominal rates increased 25% and real rates increased more than 15% (U.S. Energy Information Administration, 2012). According to the Federal Energy Administration, oil was used to generate almost 17 percent of all the electricity produced at the time (Congressional Research Service, 1977b, p. 68).

¹⁰⁰ Under the law, the FPC could opt to suspend the proposed rate increase for five months; however, the rate increase would go into effect if the Commission did not act within five months.

allow them to occur.¹⁰¹ Costs had to be absorbed through some combination of rate increases, loans, and the sale of securities; inflation made the remuneration of costs nearly impossible (Joskow & MacAvoy, 1975).

The lack of new technology developed in part because federal and state regulation favored vertically integrated utility monopolies that controlled the provision of electricity within given geographic areas (Congressional Research Service, 1977a, p. 3). As a consequence, utilities were designed to take advantage of economies of scale by becoming as large as possible to deliver electricity as efficiently as possible to all of the people they served within a region (Hirsh, 1999). This approach in the 1970s created an even greater need for capital for utilities at a time when inflation was starving the country of capital and tying up available capital in sunk costs associated with the construction of new power plants, transmission lines, and distribution systems (Congressional Research Service, 1977a, p. 7). Utilities could apply to the state commissions and the Federal Power Commission to get construction-work-in-progress (CWIP) clauses that if approved allowed the utilities to charge higher retail and wholesale rates to help pay for construction costs (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1976).

Even so, construction was unattractive because state and federal regulations made siting electric facilities time consuming and expensive (Congressional Research Service, 1977a, p. 8). There was a perverse incentive for utilities to use older and dirtier technologies because they could be sited more quickly at less expense. Delays and the expense of siting new facilities occurred due to new federal and state regulations designed to protect the environment; the costs were passed along to consumers through rate increases (Congressional Research Service, 1977a, p. 14). Costs increased for construction further as environmental interests became more successful at delaying or in some cases stopping the construction of plants through lawsuits (p. 51), resulting in less reliability, fewer attempts to improve technology, more environmental damage, and higher rates to consumers as existing facilities grew older and more expensive to operate.

¹⁰¹ The 1977 New York City blackout alone cost Con Edison “\$15 million” in immediate costs and another “\$65 million” in system upgrades. The utility confronted potentially another “\$10 billion” in lawsuit claims (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978a, p. 3).

Prelude to Congressional Action

It was clear by the end of 1976 that serious problems existed with both private electric utilities and the system designed to regulate them. As stagflation became more of a problem, public demands for action became unmistakable, and members of Congress felt the need to act, although few agreed at first on how to respond. Between 1975 and 1976, members of Congress introduced over 200 bills that involved the regulatory jurisdiction of the Federal Power Commission (Thomas, 2013v). Although a consensus did not yet exist about how best to address the problems associated with the electric utility industry and the FPC, the sheer number of bills introduced suggested that a consensus might be possible as more and more legislators concluded that something needed to be done.

Congressional Consensus and the Formation of FERC

Nature of the Crisis

The conceptual framework hypothesizes that Congress will only respond in contentious policy arenas when there is a crisis of a particular type, size, and scope. Stagflation was both a regulatory and a constituency crisis aggravated by escalating electricity rates. Members of Congress and presidents beginning with Gerald Ford saw regulation and other actions taken by government entities as contributing to the stagflation problem. The perceived linkage between regulation and stagflation indicated at least a perceived regulatory crisis. Members of Congress began to publicly question the structure and nature of regulation, and some advocated deregulation in certain policy areas (Bradley, 1996; Derthick & Quirk, 1985; U.S. Congress. Senate. Committee on Government Operations, 1977; Volner, 1976). Moreover, stagflation was a broad constituency crisis because people throughout the country experienced both rising prices and increasing unemployment. Electric utilities fed into the stagflation problem in part due to state and federal regulation.

Stagflation was a national rather than a regional or a local problem, affecting those all over the U.S. Members of Congress received complaints from constituents about increases in electricity rates, resulting in discussions and proposed legislation for electric utility rate reform (Congressional Research Service, 1977a, p. 14). Even so, some members likely heard more complaints than others as electricity rates tended to vary both by region and by state, with those

in northeastern states paying the most (Gormley, 1983, p. 55).¹⁰² Finally, in terms of scope, stagflation had been a problem for the electric utility industry for more than seven years.

Formation of FERC

While Congress considered legislation to make comprehensive changes in the way private electric utilities were governed, operated, and regulated, it opted first to enact procedural legislation reorganizing the Federal Power Commission into the Federal Energy Regulatory Commission in the Department of Energy Organization Act of 1977 (P.L. 95-91; 91 Stat. 565). The Act transferred to FERC the regulation of waterway projects, the regulation of interstate and wholesale utility activities, enforcement procedures, and the regulation of some aspects of the financial part of the utility industry along with much of the funding, personnel, and property that had belonged to the FPC (16 U.S.C 12, pp. 323-326; §§ 792, 793, 796-818, 820, 824, 824a-824h, 825, and 825a-825s).

Differences between the FPC and FERC revolved primarily around changes in the terms of office for commissioners (from five years to four years), provisions for presidential removal of commissioners for incompetence or bad behavior, and placement of FERC in the U.S. Department of Energy (42 U.S.C. §§ 7171 (b), (d); 7172 (b); § 7175). Other differences included transfer of authority to regulate the importation or exportation of energy from the FPC to the Secretary of Energy who could then transfer the authority to FERC if they chose to and to permit the Secretary to intervene in FERC proceedings (16 U.S.C. § 824a; 91 Stat. 585, § 402 (f); 42 U.S.C. §§ 7171 (b), (d); 7172 (b); 7175). Congress also appropriated \$41.6 million (see Table 15) for FERC in its first year of operation in fiscal 1978 (Office of Management and Budget, 1979, p. 384; U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1979, p. 3092).¹⁰³

Congressional Cues for FERC Action

¹⁰² States in the northeast paid the most because of large, often densely populated areas requiring a lot of electricity; unlike other regions of the country, the region did not have access to locally found fuels like natural gas or oil that could be used to fire power plants.

¹⁰³ I do not mention staff numbers as they simply fluctuated too much (Office of Management and Budget, 1979, p. 385; Federal Energy Regulatory Commission, 1979a, p. 20; U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1979, p. 3095).

Legislative opposition mounted to the use of clauses for automatic fuel adjustment (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Oversight and Investigations, 1975) and for construction-work-in-progress (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1976), since the use of such clauses resulted in increasing electricity rates (Joskow & MacAvoy, 1975). Moreover, some members were worried about growing public opposition to electric rate increases generally (Congressional Research Service, 1977a, p. 14). By the time FERC was created, proposed legislation indicated that legislators were concerned with electricity rates, regulatory and environmental problems, the need for energy conservation, streamlined processes for building new facilities, improved reliability, greater public input into Commission decisions, decreased use of automatic fuel adjustment and CWIP clauses, greater regulation over facility operations, encouragement of greater transmission interconnection and wholesale sales of electricity, and more new power facilities (Thomas, 2013v).¹⁰⁴

A New Regulatory Era Takes Shape

Congressional Concerns in 1977

In 1977, the Senate Committee on Government Operations released a unanimously approved report (U.S. Congress. Senate. Committee on Government Operations, 1977) designed to examine federal regulation. It may have been pushed in part by electricity prices that again increased between 1976 and 1977 by more than three percent when adjusted for inflation (almost nine percent in nominal terms) (Table 4; U.S. Energy Information Administration, 2012).

Lessons for FERC. Based on the results of the report, though it focused on the FPC, the new Commission had to limit the number of amendments a party could file in a proceeding to speed up case processing, and it had to restrict “pancaking” where a utility filed multiple wholesale rate increase requests before the Commission could rule on any of the requests (U.S. Congress. Senate. Committee on Government Operations, 1977, pp. 55-56). Finally, the Agency needed to

¹⁰⁴ Some of the bills reviewed in congressional hearings included S. 594, S. 1666, S. 2208, S. 2502, S. 2747, S. 3011, S. 3310, S. 3311, H.R. 6696, H.R. 10869, H.R. 11449, H.R. 11475, H.R. 12461, H.R. 12848, H.R. 12872, and H.R. 15544 (U.S. Congress. Senate. Committee on Commerce, 1976; U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1976; U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1976; U.S. Congress. Senate. Committee on Government Operations. Subcommittee on Intergovernmental Relations, 1975).

speed up its regulatory decision making by use of injunctions and informal rulemaking (pp. 16 & 24).

In addition, FERC needed to respond to concerns expressed when the Department of Energy Organization Act was being considered. Obvious to many legislators was that energy regulation was confusing and largely ineffective; the ongoing energy crisis could not be addressed adequately in part because of the regulatory problems (U.S. Congress. Senate. Committee on Governmental Affairs, 1977, p. 1; U.S. Congress. House. Committee On Government Operations. Subcommittee on Government Operations, 1977, p. 52). Too many agencies had overlapping and conflicting authority to respond effectively to the energy challenges of the time (U.S. Congress. Senate. Committee on Governmental Affairs, 1977, p. 2). As a result, Congress sought to consolidate most of the federal authority over energy into one federal regulatory agency (p. 2).

This consolidation had bi-partisan support. Some members of Congress acknowledged that efforts at regulatory reform for energy would require trial and error (U.S. Congress. Senate. Committee on Governmental Affairs, 1977, p. 107; U.S. Congress. House. Committee on Government Operations. Subcommittee on Government Operations, 1977, p. 69). This was a tacit admission that they did not know what kind of or how regulation should or would work. At the same time, some legislators expressed concern that the replacement of an independent regulatory commission with an executive branch agency might politicize the federal energy regulatory process (U.S. Congress. Senate. Committee on Governmental Affairs, 1977, p. 108; U.S. Congress. House. Committee on Government Operations. Subcommittee on Government Operations, 1977, p. 67).

To address these concerns, FERC needed to consider efforts to reduce confusion and make regulation more effective by joining with other government regulators to establish agreed upon practices and procedures that could mitigate the problem of overlapping jurisdictions. Because several legislators expressed concerns about possible politicization of electric utility regulation with the creation of the Department of Energy, FERC needed to demonstrate that on one hand it was capable of working with the Department but on the other it could make decisions independent of DOE influence. The Commission also needed to be explicit about its ability to achieve particular results, including that electric utility regulation would likely have to take place through trial and error.

Proposed Substantive Response to Crisis. Congress displayed a keen interest in developing a national energy policy in 1977; committees held numerous fact gathering hearings on legislation proposed by the Carter administration, the National Energy Act (U.S. Congress. House. Adhoc Committee on Energy, 1977). The plan emphasized energy conservation and coal conversion for power plants to lower electricity rates. In response, some members of Congress began to express concerns about the environmental impact of burning coal (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1977b, p. 8). Aside from the concerns about coal, however, legislators seemed unsure whether to embrace or to oppose the Administration's energy proposals.

Predicted Grid-Related Problems. Grave concerns also emerged about the long-term viability of the electric grid in the United States (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1977a, p. 1). In another hearing FPC officials testified that regional electricity shortages were possible by the mid-1980s (p. 127), as access to sufficient fuel supplies was not guaranteed, and it was unclear whether new generating capacity would be available soon enough to avoid shortages (p. 128). An Agency official argued that without new generation or transmission capacity the long-term viability of the electric grid would hinge exclusively on pending legislation to improve conservation. Conservation was supposed to occur through greater transmission interconnection to promote wholesale wheeling, economic dispatch,¹⁰⁵ and cogeneration (p. 129). Such transmission interconnections would necessarily require pre-arranged transmission agreements, and rate reform would encourage off-peak time usage of electricity to prevent shortages (p. 129). Ultimately, demand and supply problems would need to be addressed through conservation, transmission facility construction, the use of cogeneration, and (despite considerable public opposition) new generation facilities (p. 130).

Yet, a General Accounting Office (1977) report raised serious questions about conservation efforts that relied on transmission interconnection because of the difficulties of

¹⁰⁵ Economic dispatch occurs when utilities generate electricity at the cheapest possible price (Federal Energy Regulatory Commission, 2005a, p. 2). Wholesale wheeling happens when electricity transactions occur between entities that are not interconnected so they must gain access to the transmission lines of a third utility that is physically interconnected with the two transacting parties for the delivery of electricity to occur (Federal Energy Regulatory Commission, 1980a, p. 18).

planning, siting, and constructing transmission lines. Due to financing problems related to stagflation, environmental considerations, and institutional constraints, attempts to build new transmission facilities often were delayed or cancelled (U.S. General Accounting Office, 1977, p. 19). Without the construction of new transmission lines to connect utilities, electricity demand would have to be managed solely through demand-side conservation efforts. In another hearing, some legislators acknowledged that even if the transmission interconnection occurred it would require changes in how rates were created to cope with wholesale electricity wheeling (U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Conservation and Regulation, 1977).

Finally, Congress continued to remain concerned about power blackouts and what they meant for both utilities and regulatory systems (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978b; U.S. Congress. Joint Committee on Defense Production, 1977). At least some legislators concluded from the 1977 New York City blackout that state and federal regulation was inadequate, lessons learned from previous blackouts had been ignored, and transmission interconnection had not prevented the blackout (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978b, pp. 1-2).

FERC Reacts

FERC Decision Making Procedures. Before getting into how FERC reacted, it is helpful to understand how the Agency goes about making decisions because it may well influence how it would react to congressional crisis response.¹⁰⁶ The decision making process may begin at FERC after a consumer, state commission, or another company files a complaint against a utility and FERC decides whether to investigate (McGrew, 2009, p. 29). The Commission also can initiate the decision making process on its own or reconsider a past decision [P.L. 74-433; 49

¹⁰⁶ This study focuses on the Commission's regulation of the interstate sale and transmission of electricity and other pertinent regulations related to private electric utilities, excluding the regulation of nuclear power plants and generally the regulation of large hydroelectric projects. Although I sought to exclude the regulation of large hydroelectric projects to focus more narrowly on electric utilities, in some cases I was unable to do so because early on FERC gave hydro cases the same docket prefixes as any other electric utility. I also mention hydro cases when they have broader implications for utilities (e.g., small hydro qualifying facilities). Furthermore, the results include the regulation of wholesale and transmission rates related to electricity sold from either nuclear power plants or large hydroelectric facilities.

Stat. 856 & 857; § 213; § 307 (a)]; the federal courts may remand a past decision to the Commission for further consideration [P.L. 74-433; 49 Stat. 860 & 861; § 213; § 313 (b)]. Finally, the Agency must engage decision making when any entity applies for transmission interconnection,¹⁰⁷ for Commission approval to sell or to purchase property or securities, for approval to merge with another company, for approval to issue securities or to assume liabilities, or for transmission or wholesale electric rate increases (P.L. 74-433; 49 Stat. 848-852; § 213; § 202-206).

When the decision making process begins, the Secretary of FERC assigns a docket number to the future decision to distinguish it from others; some decisions have multiple docket numbers when they contain a number of issues that need to be decided (McGrew, 2009, p. 30).¹⁰⁸ After assigning docket numbers, the FERC Secretary must publish a notice in the *Federal Register* notifying the public of a future decision, and the notice signals a short window for the public to intervene in the proceedings (pp. 30-31).

FERC can reject or modify applications if they are incomplete or do not follow the requirements of federal law (e.g., a rate increase application that FERC found to be unreasonable; McGrew, 2009, pp. 31-32). To assist the Commission in determining whether to initially accept, modify, or reject an application for further review, the Commission delegated¹⁰⁹ authority to office directors, which include members of various boards at FERC, the director of the Office of Electric Power Regulation, the chief accountant, the commission secretary, and the presiding officer (Federal Energy Regulatory Commission, 1979a, p. 15). Similarly, the Commission can choose to continue or to end an investigation initiated by a complaint or by FERC based upon findings of fact about the need for such an investigation [P.L. 74-433; 49 Stat. 856 & 857; § 213; § 307 (a)].

¹⁰⁷ Transmission interconnection requests are not limited either to utilities or to private companies.

¹⁰⁸ For example, a future decision might involve applications for a rate increase, for transmission access, and for a merger. Each issue might well engender the issuance of a docket number, resulting in at least three docket numbers for this one future decision involving one company. In another scenario, multiple companies dealing with the same issue might be lumped together in one future decision; in the decision each company would be assigned a different docket number.

¹⁰⁹ This delegation occurred in 1978, and I will describe it in more detail in the findings chapter.

Once the Commission decides to proceed with an application or an investigation, a number of steps can be taken. Applications are treated differently depending on whether they are contested; contested applications receive more scrutiny (Federal Energy Regulatory Commission, 1992a, p. 11). Another factor the Commission considers when determining how much scrutiny an application receives is whether the request in the application is routine, with non-routine requests receiving more scrutiny (p. 11). As a result, uncontested, routine applications usually are processed and approved by Commission staff without hearings or further consideration by the commissioners themselves (Federal Energy Regulatory Commission, 1992a, p. 11; McGrew, 2009, p. 32). In such instances the staff may issue a letter order¹¹⁰ to the applicant informing them that their application has been approved for transmission interconnection, to purchase or sell property or securities, to issue securities, to assume liabilities, or to increase wholesale or transmission rates.¹¹¹ Such cases usually are limited and do not affect the entire electric utility industry.

Meanwhile, contested or non-routine applications go through a more rigorous regulatory review process. An application becomes contested when a member of the public¹¹² files either a formal protest or a motion to intervene with the Commission (McGrew, 2009, p. 31). It is up to the Commission to determine whether it needs to act in response to a formal protest (18 C.F.R. 385.211); FERC generally grants motions to intervene if they are made on time (McGrew, 2009, p. 31). For a contested application FERC can choose to have a paper hearing where it collects written evidence from the affected parties and then proceed to make a decision based upon the written materials (pp. 32-33). Such decisions can be case specific, or they may involve more

¹¹⁰ A letter order is a type of order usually directed to an applicant allowing them to proceed with requested action.

¹¹¹ One could imagine scenarios where any of these matters may be contested or involve large sums of money, subjecting it to more rigorous regulatory review. Mergers and acquisitions are not in the list because it is likely that such activities could pose long term implications both for utility investors and consumers and thus require the rigorous review process.

¹¹² This could be an individual, an interest group, or another company.

complex issues affecting the entire industry; if the entire industry is affected FERC can issue an industry-wide order or opinion.¹¹³

In other cases of contested applications, FERC can opt to assign the application to an administrative law judge at the agency, resulting in a court-like process with witnesses, attorneys, cross-examination, subpoenas, depositions, testimony, under oath, motions, compelled attendance, evidence collection, discovery, briefs, settlements, and findings of fact (McGrew, 2009, pp. 32-38). The Commission can only accept a settlement between conflicting parties if it is in the public interest; if the parties do not settle, the ALJ issues a decision (pp. 35-37). ALJ decisions are typically appealed by at least one of the participants (p. 37). Upon appeal the Commission can opt to suspend the decision of the ALJ and rehear the case itself, or the Commission can deny rehearing, establishing the ALJ decision as the decision of the Commission (P.L. 74-333; 49 Stat. 860; § 213; § 313). The Commission also can decide to rescind or to modify ALJ decisions without rehearing (P.L. 74-333; 49 Stat. 860; § 213; § 313).

Investigations follow a process similar to contested applications assigned to ALJs except investigations typically occur before the Commission itself. The similarities include the court-like process with attorneys, witnesses, rules of evidence collection, and subpoenas (P.L. 74-333; 49 Stat. 856-859; § 213; §§ 307-311). Commission decisions resulting from such investigations also can be appealed, and the Commission follows the same process as it does for an appeal of an ALJ decision on a contested application. It is important to note that all appeals of any Commission decision must go through the adjudicative process outlined above before they can be appealed to the federal courts (P.L. 74-333; 49 Stat. 860-861; § 213; § 313). Finally, FERC reserves the right to amend any industry-wide order or opinion issued in response to an application or investigation and to respond to any issues that arise in the course of fulfilling its regulatory responsibilities (P.L. 74-333; 49 Stat. 858; § 213; § 309); it did so hundreds of times between 1977 and 2008.¹¹⁴

¹¹³ This is similar to court cases that can be narrowly tailored to resolve one case or decided in ways that have broader societal impact.

¹¹⁴ According to the cumulative indices provided by the Commerce Clearing House (Federal Energy Regulatory Commission, 1977-2008), between 1977 and 2008 FERC issued 728 industry-wide orders and an additional 340 amendments of those orders. Over the same period, FERC issued 501 industry-wide opinions and 350 amendments of those opinions (Federal Energy Regulatory Commission, 1977-2008).

Formal Decision Making. FERC began operating on October 1, 1977, and days later it issued Order Number 1 (Federal Energy Regulatory Commission, 1977e; see Tables 19-20) adding a Title 18 part 0 to the Code of Federal Regulations (C.F.R.). The order transferred proceedings from the FPC to FERC, and it affirmed FERC's ability to delegate authority to personnel working at the Agency such as administrative law judges, accountants, and engineers (Federal Energy Regulatory Commission, 1978o, pp. 5-6). In addition, the Order established that rules and regulations transferred to the Commission would remain in full force unless the FERC otherwise acted (Federal Energy Regulatory Commission, 1977e, p. 1). Appendix A listed functions that the Department of Energy Organization Act specifically gave FERC (Federal Energy Regulatory Commission, Appendix A, 1977, pp 1-3), and Appendix B detailed functions the Secretary of Energy delegated to the Commission (Federal Energy Regulatory Commission, Appendix B, 1977, pp. 1-3). FERC also amended FPC Opinion Number 809, to clarify depreciation rates for the purposes of ratemaking for electric utilities (Federal Energy Regulatory Commission, 1977a).

Overall, out of the 340 FERC decisions¹¹⁵ between October 1, 1977 and December 31, 1977, 96 (roughly 28%)¹¹⁶ had docket letter prefixes found in the electric utility library at FERC (Table 24; Federal Energy Regulatory Commission, 2011). Of the electric utility-related decisions (see Tables 24-27), 67% contained the docket prefix ER, assigned to decisions related to either wholesale or to transmission rates. Decisions with this ER prefix could have resulted from applications from a company to raise either wholesale or transmission rates or they could have come from another entity challenging wholesale or transmission rates. Another 17% of the electric utility-related decisions had the docket prefix ES, for applications from utilities to

¹¹⁵ The results of the Lexis-Nexis Academic search include both industry-wide orders (designated as rule making) and opinions, and decision specific orders and opinions. The list of orders and opinions in the cumulative indices of the Commerce Clearing House (CCH) shows only the industry-wide decisions; however, the decision-specific orders and opinions can be found separately by company and docket number. I will describe the difference between industry-wide and decision-specific decisions below.

¹¹⁶ The decisions include industry-wide opinions because they have electricity-related docket prefixes but not orders because industry-wide orders usually have a special separate rulemaking prefix. This is not a problem because I deal with industry-wide orders and opinions separate from the general orders and opinions. See Table 21 for a list of opinions.

assume liabilities or to issue securities. Thirteen percent of the decisions contained the docket prefix E, which applies to all electricity cases, and 20% had multiple docket designations.

A closer examination of the decisions reveals that FERC focused on wholesale electricity rates, including rate settlements; the use of automatic fuel adjustment clauses; and the use of CWIP clauses, dovetailing with legislative concerns in these areas. Clearly, the rate settlements expedited FERC's regulatory activities, much as Congress had requested; FERC trimmed the number of pending wholesale rate increase requests from 214 at the end of fiscal year 1977 to 166 by the end of fiscal year 1978 (Federal Energy Regulatory Commission, 1979a, p. 40).

In its first three months of operation, then, FERC issued formal decisions directly related to some of the concerns members of Congress had expressed. It inherited Order Number 555 (Federal Energy Regulatory Commission, 1977g), which limited the use of CWIP clauses. FERC also enforced another order it inherited, Order Number 790, limiting the use of automatic fuel adjustment clauses (Federal Energy Regulatory Commission, 1977f). Moreover, in another case, FERC justified its approval of notes issued by a utility because the notes would help pay for a generating facility that would in turn ensure greater electricity reliability for the consumers it served (Federal Energy Regulatory Commission, 1977d). Congress had supported transmission interconnection and wholesale electricity wheeling; FERC did not dissuade other utilities from participating in transmission interconnection and wheeling by upholding just and reasonable transmission rates in a decision (Federal Energy Regulatory Commission, 1977b). Perhaps in a bow to legislative support for power pooling,¹¹⁷ FERC amended a pre-existing power pooling arrangement (Federal Energy Regulatory Commission, 1977f). Finally, the Agency addressed another issue important to Congress; in docket number E-9599 (1 F.E.R.C. P61,091), it announced that it would continue to investigate the causes of the New York City blackout (Federal Energy Regulatory Commission, 1977c).

Informal Decision Making. Areas of legislative concern that FERC addressed in more informal ways included expedited decision making and streamlined permitting processes for new facilities. To expedite decision making, the Agency implemented a new computer program to track casework; it established timetables to complete work on each case; and it established

¹¹⁷ A power pool is an arrangement between two or more electric systems that are interconnected to coordinate and plan the use of electricity to improve efficiency and reliability (Federal Energy Regulatory Commission, 2013d).

yardsticks to measure productivity and to provide for more individual accountability (Federal Energy Regulatory Commission, 1979a, p. 14). Cumulatively, the streamlined processes, procedures, and settlements helped to reduce case processing time by nearly 40% (p. 14).

Subjects of congressional concern that FERC evidently did not address included environmental problems, regional planning for electric utilities, reliability standards for grid systems, streamlined permitting processes for new facilities, other general issues related to regulatory overlap and underlap and the development of more new facilities, and energy conservation. The Commission had no regulatory jurisdiction over the environmental impact of transmission lines or non-hydroelectric power plants, and it did not establish informal relationships with environmental agencies, even though such ties might have been beneficial for all of the agencies involved, the utilities, and even the environment. Similarly, FERC neither got involved with nor established informal regulatory relationships with other agencies on regional planning, reliability standards, permitting processes for new non-hydroelectric facilities, and other issues pertaining regulatory overlap and underlap. Again, this likely was because FERC did not have regulatory jurisdiction in these policy areas. Meanwhile, energy conservation clearly fell within FERC's jurisdiction under both the Federal Power Act (P.L. 74-333; 49 Stat. 838) and the Department of Energy Organization Act (P.L. 95-91; 91 Stat. 565), but the Agency waited to promote such activities. This perhaps suggested that the Commission simply did not have the time to explicitly address electricity conservation in its first three months.

Substantive Reform in 1978

Congressional Feedback

Between 1977 and 1978, members of Congress introduced 23 bills¹¹⁸ related to the regulatory authority of the Commission, compared to the hundreds of bills on FPC authority introduced in the 94th and 95th Congresses. Even though Congress had created FERC, it continued to debate and amend elements of the National Energy Act that would affect agency operations when the statutes were enacted. As legislative work on the Act continued, the price of electricity increased again between 1977 and the end of 1978 by roughly eight percent in

¹¹⁸ The bills included the Department of Energy Organization Act of 1977 (P.L. 95-91; 91 Stat. 565), the Public Utility Regulatory Policies Act (PURPA) (P.L. 95-617; 92 Stat. 3117) of 1978, and the Power Plant and Industrial Fuel Use Act (P.L. 95-620; 92 Stat. 3289). See Tables 16 and 18 (Thomas, 2013a).

nominal terms and by two percent in real terms (Table 4; U.S. Energy Information Administration, 2012).

Continued legislative interest in developing a national energy policy may have reflected more international energy concerns and prices than FERC's performance. Nevertheless, some members of Congress indicated they were concerned with FERC's performance (U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978). This may well have led to the 30 percent increase in FERC's appropriations from fiscal year 1978 (\$41.6 million) to fiscal 1979 (\$54.13 million) (see Table 15 for sources).

Congressional attention may have been provoked in part by a hearing in which FERC Chairman Charles Curtis testified that the Agency had inherited a tremendous backlog of regulatory cases from the FPC¹¹⁹ (U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978, p. 876). He indicated that FERC would need to use most of its time and funds to clear its regulatory case load. According to Curtis, the Agency suffered from being under-staffed,¹²⁰ having an insufficient budget, and operating with inefficient decision making procedures (p. 876). To remedy some of the problems, the Chair requested a modest budget increase of roughly five percent and 1,400 positions; he promised the Agency would focus on clearing its regulatory docket by reforming some of its regulatory procedures (pp. 874-876). Additionally, Curtis asked Congress to pass legislation allowing FERC to delegate more of its regulatory responsibilities and to limit the actions it regulated, thus reducing the Agency's docket and allowing personnel to focus on the most important energy issues (p. 965). Congress addressed some of these concerns with the 30 percent budget increase for FY 1979.

Meanwhile, in a House hearing on the 1977 New York City blackout, some legislators seemed particularly annoyed that the FPC and later FERC had not completed their investigation of and issued a report on the power outage by the time of the hearing on October 13, 1977 (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and

¹¹⁹ Curtis estimated that FERC inherited between 6,000 and 8,000 pending cases (U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978, p. 962).

¹²⁰ At the time part of the staffing problem resulted from a turnover rate of up to 20 percent; in most other federal agencies the rate was around 10 percent (U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978, p. 964).

Power, 1978b, p. 113). Legislators questioned why the Commission had not required closer cooperation and coordination among utilities to prevent blackouts. Chairman Curtis countered that twice in the mid-1960s, in consultation with and the support of the Johnson administration, the FPC had legislation drafted and introduced in Congress that would have given the Commission the authority to mandate transmission interconnection among utilities to prevent blackouts; Congress failed to act and did not budget money for the Commission to engage in reliability-related activities (pp. 187-188). FERC had only limited voluntary interconnection powers under the Federal Power Act, and it was not funded or staffed to do more.

Congress also was concerned with a strike by coal workers in 1977. The country relied on coal to help drive down the price of electricity to diminish stagflation. A strike could undermine such efforts, increasing electricity prices. FERC was responsible for providing information from utilities on “coal deliveries and consumption” to determine the impact of a strike on electricity prices (U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Production and Supply, 1978, p. 25).

FERC finally completed its report and recommendations on the New York City blackout in 1978, and Chairman Curtis was called to testify before Subcommittee Chair John Dingell (D – MI). Dingell stated that the hearing’s purpose was to examine what steps to take to avoid future blackouts, the economic costs of such events and necessary preventative action, and whether Congress needed to address any regulatory gaps related to grid reliability (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978a, p. 1). Curtis testified that the outage resulted from a combination of natural causes, human error, and mechanical failure, and he warned that reliability was constrained by the competence of utilities, financial resources, politics, and the physical characteristics of each grid system (pp. 3-5). To address these problems Curtis recommended in part that the federal government work cooperatively with the states, utilities, and the regional electric reliability entities to develop agreed upon norms for regional reliability standards and to select and train appropriate personnel to use equipment in ways designed to improve system reliability (p. 4). Finally, he also indicated that Congress should consider enabling the regional electric reliability councils to license system operators if they engaged in interstate commerce to ensure that such operators met certain criteria the councils established before the operators could act (p. 5).

Cumulatively, then, members of Congress became aware of FERC's problems. The problems made dealing with challenges like the regulatory backlog of cases and the high cost of energy very difficult (U.S. Congress. House. Committee on Interior and Insular Affairs. Subcommittee on Energy and Environment, 1978; U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978). FERC's overstretched resources were stressed even further because of its need to respond to crises such as the New York City blackout and the coal strike (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978a; U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Production and Supply, 1978). FERC's inability to respond as some members of Congress wanted to these crises clearly frustrated legislators and likely helped produce the 30 percent budget increase (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1978a). Some legislators were frustrated further because the Agency lacked the regulatory authority to mandate transmission interconnections and the development and enforcement of reliability standards among utilities to prevent blackouts. Although legislators with more intimate knowledge of the Agency's problems succeeded in increasing FERC's budget, they were not immediately able to address some of the regulatory constraints that limited the Commission's authority.

FERC Actions

Between January 1, and November 9, 1978, FERC issued three orders (Tables 19 and 20) and eight opinions (Tables 21 and 22). As one can see from Table 20, two of the orders were administrative and one dealt with the revision of forms. Table 22 reveals that six of the opinions focused on wholesale rate matters, while one involved a complaint against a utility for anticompetitive behavior and another dealt with transmission rates and a service agreement. At the same time FERC also issued three rules related directly to electric utilities. The Commission established a procedure (RM78-16) that utilities must follow if they submitted a settlement agreement (Federal Energy Regulatory Commission, 1978n). FERC encouraged settlements, seeing them as a way to save time and money for consumers, utilities, and the Agency (McGrew, 2009, pp. 35-37; U.S. Congress. House. Committee on Appropriations. Subcommittee on Public Works, 1978, p. 961). To help reduce the burden of its regulatory responsibilities, FERC adopted a rule (RM78-19; 43 F.R. 36433) delegating more authority internally (Federal Energy Regulatory Commission, 1978b). The Agency's Chief Accountant could now sign routine

correspondence and approve routine determinations for utility securities and stocks (p. 36434), and the director of the Office of Electric Power Regulation could “accept or reject certain rate filings” (p. 36434). A third rule (RM78-21; Federal Energy Regulatory Commission, 1978a) required anyone seeking a stay of a Commission order to file for judicial review and FERC rehearing simultaneously.

In 1978 FERC issued 1,488 formal decisions with docket numbers. Of these, about 25% (see Tables 24-27) dealt with matters related to private electric utilities. Two new prefixes, “EL and ID,” appeared in the electric utility total, with “EL” designating “any formal filing” related to electric utilities, often resulting in court-like cases before the Commission, and “ID” “interlocking directorates”¹²¹ (Federal Energy Regulatory Commission, 2011). Looking only at the electric utility decisions, roughly 56% were “ER” rate decisions, 20% were “ES” security or liability decisions, and 14% had the “E” prefix involving some general aspect of electric utility regulation. As FERC began to work in 1978 to delegate more authority to staff (Federal Energy Regulatory Commission, 1979a, p. 15), ALJs made 17% of the decisions, the Commission 74%, and office directors 9%.

Overall, FERC’s decisions indicated that concern both in Congress and the Agency remained over the speed with which the Agency performed its regulatory responsibilities. The evidence suggests that the Commission tried to combat efficiency problems through increased delegation, calls for an increased budget and staff, development of new computer software to track cases, establishment of case deadlines, and development and use of productivity measurements to improve individual accountability. Even with its efficiency challenges, the FERC was responsive to Congress’s concerns.

Congress Passes PURPA

In 1978 Congress finally enacted substantive legislation to address both growing public pressure to end the increases in retail electricity rates (Table 4; U.S. Energy Information Administration, 2012), and its mounting disappointment with FERC’s regulatory performance. Two bills, the Public Utility Regulatory Policies Act (PURPA; P.L. 95-617; 92 Stat. 3117) and the Power Plant and Industrial Fuel Use Act (P.L. 95-620; 92 Stat. 3289), were designed to

¹²¹ An interlocking directorate occurs in an electric utility when a person holds a position of authority with a utility and another entity (such as a bank) that might result in a conflict of interest; to keep both positions the person must file with and get the formal approval of FERC (P.L. 74-333; 49 Stat. 856; § 213; § 305 (b)).

address these problems (Table 18). PURPA affected FERC and private electric utilities most directly (Griffin & Puller, 2005, p. 20; McGrew, 2009, p. 250). As chapter 3 detailed, PURPA established a framework for the development of an artificially imposed marketplace for electricity generation to establish “competition” among utility and non-utility electricity generators. This new framework was superimposed on the pre-existing natural monopoly structure for electric utilities that state and federal regulation had encouraged.

PURPA was designed to improve FERC’s wholesale rate application procedures, electric transmission for wholesale purposes, regulations for the wholesale sale of electricity, grid reliability, electricity conservation, efficiency, and Commission review of the use of automatic fuel adjustment clauses. The law required the Commission to conduct a study to result in new procedures to speed up the wholesale electric ratemaking process (P.L. 95-617; 92 Stat. 3142; § 207). Congress also gave FERC the authority to order transmission interconnection between a utility and a qualifying facility (QF)¹²² to encourage wholesale electricity competition (P.L. 95-617; 92 Stat. 3135-3136; § 202; § 210). Such competition was assisted further as FERC was given the authority to order transmission access after a utility or a QF had purchased electricity wholesale from another utility or QF (P.L. 95-617; 92 Stat. 3136-3138; § 203; § 211). The Commission also was authorized to order the sale or purchase of electricity between qualifying facilities and utilities (P.L. 95-617; 92 Stat. 3144-3147; § 210). To improve grid reliability, FERC had to conduct a study to produce recommendations to maximize grid performance (P.L. 95-617; 92 Stat. 3143-3144; § 209). FERC also could issue orders related to electricity conservation and efficiency by allowing utilities to pool their electricity supplies, and examine the usefulness of such pooling arrangements (P.L. 95-617; 92 Stat. 3140-3141; § 205). The statute also required FERC to review the use of automatic fuel adjustment clauses on a periodic basis and prevent their use when it was not efficient (P.L. 95-617; 92 Stat. 3142-3143; § 208). Finally, the law gave states the flexibility to establish retail rates from a menu of options (P.L. 95-617; 92 Stat. 3121-3128; §§ 111-117).

¹²² A qualifying facility is a cogeneration facility or a small power production facility that meets criteria established by FERC. As a result it can sell electricity to utilities in the wholesale electricity market under terms and conditions established for QFs (P.L. 95-617; 92 Stat. 3134-3135; § 201; § 3 (17) & (18)).

While PURPA addressed problems associated with both retail electricity rates and FERC's regulatory performance, the Power Plant and Industrial Fuel Use Act (P.L. 95-620; 92 Stat. 3289) focused on steps designed to lower electricity rates. This statute mandated that electric power plants use coal (coal became cheaper again after the strike ended) or another alternative energy source whenever possible rather than natural gas or petroleum to lower electricity prices (P.L. 95-620; 92 Stat. 3291). Meanwhile, it prohibited all new power plants except cogeneration facilities from using natural gas or petroleum (P.L. 95-620; 92 Stat. 3298; § 201). The Fuel Use Act required FERC to develop design capacity rules for new power plants [P.L. 95-620; 92 Stat. 3296; § 103 (a) (18) (D)].

FERC Responds

In an attempt to address congressional concerns with wholesale electric rate application procedures, Chairman Curtis publicly floated the idea of granting state public utility commissions the right to regulate wholesale electricity rates (Curtis, 1980, pp. 1395-1399; Pfeffer & Lindsay, 1984, pp. 104-106). Yet, legislators evidently were not keen on turning over such authority to the states. Perhaps as a result of such reluctance, Curtis advocated the development of a generic ratemaking process (Curtis, 1980, p. 1352). This would occur through changes to FERC's rules in the Code of Federal Regulations and be designed to speed up the ratemaking process.

To improve grid efficiency and reliability, FERC spent much of 1979 developing rules and considering cases that would assist in implementing various provisions of PURPA; many would not be finalized until the 1980s (Federal Energy Regulatory Commission, 1980a, pp. 15-20). Each rule or finding needed to meticulously detail the procedures required before FERC issued orders mandating the transmission interconnection of qualifying facilities, allowing transmission access for wheeling; or permitting a utility to sell to or purchase electricity from a qualifying facility (Federal Energy Regulatory Commission, 1980a, p. 18). Finally, reports that suggested improvements for grid reliability, power pooling, and automatic fuel adjustment clauses would not be completed until the mid-1980s.

FERC issued eight orders (Tables 19 and 20) and ten opinions (Tables 21 and 22) in 1979. Of the orders two were administrative, two revised forms, two implemented PURPA provisions, one delegated authority, and one established power plant design capacity under the Power Plant and Industrial Fuel Use Act. Meanwhile, all of the opinions dealt with various

elements of wholesale rate decisions including fuel adjustment clauses, spot prices of fuel, power outage expenses, accounting matters, and rates of return, costs, and price squeezes.

Overall, FERC's formal decisions had a similar rate-based focus. The Commission made 2,080 formal decisions, nearly 19% of which were electricity-related.¹²³ Of the electricity-related decisions, 58% were "ER," rate decisions, a two percent increase over the previous year, and 20% were "ES" security and liability decisions, a seven percent increase over 1978. The rest of the formal decisions included 12% with an "E" prefix, 4% with an "EL" prefix, and 4% with mixed prefixes. Expanded delegation also meant that office directors made 22% of the formal decisions (a 150% increase over the previous year), the Commission 56% (down 18%), and ALJs 22% (a 43% increase), decreasing the Commission's workload as both Congress and FERC wanted.

FERC evidently was caught between rapid organizational change and shifts in the broader policy environment. It tried to respond to all of Congress's demands, while at the same time seeking to adapt to the changes PURPA placed on the utility industry. For an established, well-respected agency navigating these changes would have been difficult; trying to do so as a new agency was close to impossible.

Regulatory Problems Persist

Congressional Feedback in 1979

A mixture of issues -- growing pains at FERC, the persistence of high electricity retail rates, and the complexity associated with PURPA implementation -- continued to push congressional actions. FERC still suffered from being overburdened with regulatory work, high staff turnover, and an insufficient budget to perform all of the tasks it was assigned. Once again, the average nominal retail rate of electricity increased by eight percent from the end of 1978 until the end of 1979, though the average real electricity rates declined by one percent over the same period (Table 4; U.S. Energy Information Administration, 2012). PURPA added a layer of complexity to the regulation of private electric utilities because it attempted to establish a decentralized model for electric power generation. As a result, the legislation added complexity for FERC, state public utility commissions, and private electric utilities.

¹²³ In 1978 electricity decisions made up 25% of the Commission's yearly total, while in 1979 electricity decisions made up only 19% of the total. It is unclear why this was the case. See Tables 24-27 in the Appendix.

Legislators introduced 37 bills in 1979 that contained references to the Federal Energy Regulatory Commission (Tables 16 and 17; Thomas, 2013b). Of these, at least four if adopted would have directly established new policies, processes, and procedures for the development of new electricity rates in order to limit or in some cases prevent electric rate increases for the average citizen.¹²⁴ At least another 11 bills were designed to lower rates by increasing the supply of energy through encouraging the development of alternative sources of energy to generate electricity including small hydroelectric dams (H.R. 3431, H.R. 5278, and S. 1558), geothermal projects (H.R. 4471, H.R. 4622, H.R. 5227, H.R. 6154, and S. 1330), and solar and wind power (H.R. 5622, S.932, and S. 1904). These bills were a natural fit with PURPA because the object of establishing small power production facilities through more federal regulation was to encourage in part the use of more environmentally friendly fuels to generate electricity. Two of the bills ultimately became law in 1980: H.R. 5278 and S. 932 (Table 18).

Congress remained keenly aware of some of FERC's budgetary problems and attempted to address them. For fiscal year 1980 Congress appropriated \$68.387 million for FERC (Table 15; Office of Management and Budget, 1982, p. I-J15); however, the Agency actually spent only \$67.613 million, still a 25% increase over the previous fiscal year (Office of Management and Budget, 1982, p. I-J15; Federal Energy Regulatory Commission, 1981a, p. 4; U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1981, p. 1507).

Political trends toward smaller agency budget and staff sizes began to work against the Agency and created more impatience in Congress. In testimony on the fiscal 1980 budget before the House Subcommittee on Energy and Water Development, members expressed irritation with FERC's yearly requests for an increased budget and more staff (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1979). Some legislators were annoyed further because they questioned whether FERC had spent past funds as Congress had intended (pp. 3186, 3193). Meanwhile, the Carter administration attempted to limit the size of agency budgets and the number of personnel in the federal executive branch to

¹²⁴ These bills included H.R. 277, H.R. 1977, H.R. 4648, and H.R. 4652 in 1979 (Thomas, 2013b).

help address stagflation. Chairman Curtis's testimony to the Subcommittee revealed that OMB had reduced FERC's budget and personnel requests for FY 1980 (pp. 3186, 3201).

At the same time, in Congress there was a growing technical debate over the future structure of the electric power system. At issue was whether it was technically possible to move the grid away from existing centralized generation and transmission units, which were constrained by growing costs, scarce capital, and siting problems, toward a more decentralized, less expensive, and easier to site system defined by integrated cogeneration and renewable small power production generation facilities (Behrens, Kaufman, & Bodilly, 1979, p. 1). Open to discussion as well was whether elements of the existing system could be integrated into or were compatible with elements of the newer decentralized system (p. 1); this is precisely what Congress and the President sought to accomplish with the passage of PURPA, which FERC was charged with implementing.

FERC Responds to Challenges in 1980

By the end of 1979 FERC plainly faced a number of political, economic, and regulatory challenges. Politically, Congress was keeping tabs on the Agency's efforts to implement elements of PURPA; legislators complained about the backlog of rate cases still under review at the Commission (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1980). Due to the economic challenge of stagflation the Carter administration began an effort, which OMB largely directed, to rein in the budgets and staff sizes of all federal agencies. Although from the evidence it seems clear that FERC was underfunded and understaffed for all of the tasks it was assigned, it would be ever more difficult to argue for increased resources when the President and to a growing degree Congress expected agencies to consider national economic circumstances when making budget requests.

FERC's regulatory challenges were clear when Chairman Curtis noted that as of late October of 1979 the Commission still had over 60,000 pending cases (U.S. Congress. Senate. Committee on Governmental Affairs. Subcommittee on Energy, Nuclear Proliferation, and Federal Services, 1980, p. 368). Although as Curtis pointed out such a backlog was in part the product of procedures mandated by federal law (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1980b), Congress remained interested in speeding up overall Commission decision making (U.S. General Accounting Office,

1979; United States. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1980).

In this larger context FERC began to respond to its predicament in 1980 by issuing 10 orders (Tables 19 and 20) and 19 opinions (Tables 21 and 22). Table 20 shows that five of the orders implemented various PURPA provisions, two revised the filing requirements for interlocking directorates,¹²⁵ one was administrative, one related to transmission rate schedule filings, and one changed wholesale rate schedule requirements. As one can see in Table 22, 16 of the opinions dealt with factors that affected wholesale rates, two decided cases relevant to transmission rates and wholesale wheeling, and one involved a settlement.

Moreover, in 1980 FERC issued 2,318 decisions (Tables 24-27), 22% of which had docket prefixes indicating that they were electricity-related decisions. Once again “ER” rate decisions made up 50% of the electricity cases (Federal Energy Regulatory Commission, 2011). Other significant totals came from “ES” security and liability decisions (18%) and “EL” miscellaneous filings (10%). Two new docket prefixes deserve mention because they deal directly with elements of PURPA. “RE” refers to a FERC filing seeking either a time extension or an exemption from the provisions of PURPA; it made up 10% of the docketed cases for electricity (Federal Energy Regulatory Commission, 2011). The other new docket prefix, “QF,” deals with small power production and cogeneration facilities seeking qualifying facility status under PURPA; these made up 3% of the cases for electricity (Federal Energy Regulatory Commission, 2011). Finally, cases with the designation “E” (generic electricity decisions) comprised 5% of the total number of electricity decisions (Federal Energy Regulatory Commission, 2011). ALJs decided 22% of the decisions, the Commission 56%, and office directors 26%.

The data on FERC’s decisions in 1980 are important for several reasons. First, they show that the Commission really began in earnest in 1980 to implement the provisions of PURPA related to the development of qualifying facilities. Next, although rate-related cases increased over the previous year, the percentage of decisions such cases represented declined by eight percent. The evidence also point to a marked increase in miscellaneous filings by electric utilities, 53 (10%) in 1980 compared to 16 (4%) in 1979; this rise might be explained by

¹²⁵ It is important to note that the filing requirement changes for interlocking directorates occurred under provisions found in PURPA as well; see Table 20.

administrative or legal challenges by utilities or other parties to regulatory elements of PURPA. Other notable findings include that although the number of security and debt-related cases increased from 79 in 1979 to 95 in 1980, the percentage of decisions that these cases represented declined from 20% in 1979 to 18% in 1980. The percentage declines both for rate and for security and debt cases might have been lagging indicators of the brief decrease in average national real retail electricity rates between 1978 and 1979.

Congress Reacts in 1980

Although it was clear by 1979 that FERC operated in a more hostile policy environment, the same also was true for the President and Congress as they found themselves hamstrung by national economic problems and the Iranian hostage crisis. Matters were complicated further in 1980 since it was also an election year, and voters were likely to blame at least some incumbents in Congress and the President. This broader context probably influenced how Congress opted to deal with FERC.

Between 1979 and 1980 the average nominal retail rates for electricity in the United States increased by nearly 18%, and the average real retail rates increased by nearly 8% (Table 4; U.S. Energy Information Administration, 2012). Likely in response to both electricity rates and FERC's responsibility to implement laws related to private electric utilities, legislators introduced 26 bills in 1980 to address various aspects of the electric utility industry (Tables 16 and 17; Thomas, 2013c). In 1980 three bills were designed to lower electricity rates, two to encourage the development of small hydroelectric projects, and four others to get power plants to conserve fuel by switching from oil and natural gas to other fuel sources.¹²⁶ Finally, for fiscal year 1981 Congress appropriated \$74.374 million for FERC (Table 15), almost a nine percent increase (P.L. 96-367; 94 Stat. 1335; U.S. Congress. Senate. Committee on Appropriations. Subcommittee of Committee on Appropriations 1981, p. 1282), and an additional one million was later added in a supplemental appropriation (P.L. 97-12; 95 Stat. 85; Office of Management and Budget, 1983, p. I-V33).

¹²⁶ The three bills written to lower electricity rates were H.R. 7308, H.R. 8220, and H.R. 8408 (Thomas, 2013c). Meanwhile, the two bills that sought to encourage the development of small hydroelectric projects were H.R. 6946 and H.R. 6948 (Thomas, 2013c), and the four bills designed to encourage the conservation of fuel by power plants were H.R. 6930, H.R. 6999, H.R. 7341, and H.R. 7809 (Thomas, 2013c). None of the bills passed.

Congress throughout 1980 tried to figure out ways to improve both how FERC functioned and its results. In a hearing before the House Subcommittee on Administrative Law and Governmental Affairs, Chairman Curtis was called to testify on a bill titled the “Regulation Reform Act of 1979” (H.R. 3263; U.S. Congress. House. Committee on the Judiciary. Subcommittee on Administrative Law and Governmental Relations, 1980). The legislation attempted to address the regulatory problems in all federal agencies simultaneously. Electric utilities and FERC believed if adopted the bill would make effective regulation of the industry impossible (p. 1208 & 1210), and as a result they both opposed the measure (p. 1210).

Instead, Chairman Curtis (1980) presented for the record a copy of the report required by Section 207 of PURPA on problems related to wholesale electricity ratemaking; it included recommendations for Congress to improve FERC’s effectiveness. First, the report recommended that wholesale rate increases should not go into effect until approved by the Commission (Curtis, 1980, p. 1388). Next, statutory changes should be made to allow Commission staff to make final decisions to free the Commissioners to focus on other important matters (pp. 1390-1392). Moreover, Congress should give FERC the opportunity to correct regulatory errors before going through judicial review and give the Agency the authority to waive a rehearing request, allowing for immediate review by the Federal Court of Appeals (pp. 1392-1393). Lastly, Congress should consider whether to regulate wholesale electricity transactions when they occur solely within the borders of one state (p. 1395).

Learning perhaps from the previous year’s budget testimony, Curtis listed FERC’s accomplishments over the previous two years and noted how previous budgets and staff increases had assisted the Agency’s efforts (U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Energy and Power, 1980a). In turn, although Chairman Curtis did not ask specifically for more staff, Subcommittee Chairman John Dingell promised to do whatever he could to ensure that the Agency had adequate staff levels (p. 445).

Meanwhile, Subcommittee members continued to express concerns about the length of time it took for wholesale rate increase requests to be completed. Curtis noted that part of the problem stemmed from two U.S. Supreme Court decisions: *Federal Power Commission v. Southern California Edison Company et al.* [376 U.S. 205 (1964)] and *Federal Power Commission v. Conway Corporation et al.* [426 U.S. 271 (1976)]. Together, the rulings meant that FERC would have to rule on all wholesale rate cases, and it would have to review state-

created retail electricity rates before determining whether a wholesale rate increase request for one utility was just and reasonable. According to Curtis, to speed up the wholesale rate request process, FERC was able to delegate more than half of all such decisions to its staff; overall the Commission decreased its year-to-year case backlog by roughly eight percent (p. 437 & 443). Finally, despite protests from some legislators because government spending was linked to inflation, the Commission asked for an increased budget because of an increased workload following the passage of the National Energy Act (pp. 453-454).

Another hearing revealed that FERC was trying to implement PURPA provisions in coordination with the states, and budget constraints continued to be a major topic of concern. According to testimony, FERC had been working directly with the states through the National Association of Regulatory Utilities Commissioners (NARUC), made up of representatives from state public utility commissions, to coordinate the development of rules and regulations for qualifying facilities and the reporting of cost information for utilities under PURPA¹²⁷ (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1980, pp. 2966-2967). The object was to try and prevent conflict between federal and state governments over how provisions in PURPA should be implemented.¹²⁸ Next, the Carter administration required FERC to cut its budget request for FY 1981 by over \$4 million (p. 2938). Ultimately, legislators encouraged FERC to further pursue its efforts to eliminate unnecessary paperwork and to increase its use of informal rulemaking to save time and money for both utilities and the Agency (pp. 2971-2972).

Partisan Change after the 1980 Election

FERC Faces New Realities in 1981

If 1980 proved to be a rocky year for both FERC and Congress, 1981 brought with it the realities of a new Republican president and a Republican-controlled Senate. As in the past, the partisan switch produced at least as much continuity as change. Policy changes often were subtler than one might have expected. For the first time in the history of the Commission, it

¹²⁷ Little evidence suggests that beyond implementing the provisions of PURPA FERC made a concerted effort to establish informal mechanisms with the state public utility commissions.

¹²⁸ This effort was not entirely successful; see *FERC v. Mississippi* [456 U.S. 742 (1982)].

would have a chair other than Charles Curtis.¹²⁹ The new Chairman, C. M. Butler III, was appointed by President Reagan, confirmed by the Senate, and began serving in June 1981 (Federal Energy Regulatory Commission, 1983a, p. iv). The Agency continued to perform many of the same duties and to act in many of the same ways as it did before the 1980 election.

To get a better sense of how FERC acted after the 1980 election, it is useful to begin by examining the orders it adopted pertinent to private electric utility regulation in 1981. The Commission issued six orders (Tables 19 and 20) and 12 opinions (Tables 21 and 22). Of the orders, two implemented provisions in PURPA, one was administrative, one delegated more authority to the office directors, one changed the filing requirements for interlocking directorates, and another changed the tax provisions for wholesale ratemaking purposes. Table 22 shows that of the 12 opinions FERC issued in 1981, 11 dealt specifically with wholesale ratemaking factors and one determined the allocation of costs due to the abandonment of a power plant project.

Meanwhile, FERC also issued a number of docketed electric utility decisions in 1981. Out of 2,861 decisions, 19% had prefixes related to electric utility regulation (Tables 24-27). Of these, 52% were “ER” rate decisions, and 21% were “ES” security and liability decisions (Federal Energy Regulatory Commission, 2011). Additionally, 10% were “QF” qualifying facility status decisions and six percent were “EL” formal filings (Federal Energy Regulatory Commission, 2011). Moreover, 22% of the electric utility decisions were made by ALJs, 49% by the Commission, and 29% by the office directors.

Taken together these decisions are revealing. First, roughly 73% of the decisions dealt with rates and costs, suggesting that electricity remained and was becoming ever more expensive to make and to distribute. These cases also suggest that FERC, like Congress, was concerned with the price of electricity. Next, the increase in the numbers of individuals, small businesses, and multi-national corporations applying for the “QF” designation indicated a growing level of support for the development of small power production and cogeneration facilities, which might help overcome some of the public opposition to the development of new generation and transmission facilities by providing alternative sources of electricity. Finally, in keeping with both the Commission’s and Congress’s desire to delegate more authority and tasks to FERC staff to speed up case processing, from 1980 to 1981 the number and percentage of cases the office

¹²⁹ Georgiana Sheldon served as acting Chair at FERC between January and June 1981 until the Senate confirmed Butler (Federal Energy Regulatory Commission, 1983a, p. iv).

directors at FERC handled notably increased; in 1980 the directors processed 132 (26%) of the decisions, while in 1981 they made 161 (29%) of the decisions.

Congressional Approach in 1981

It is useful to examine how congressional behavior toward both FERC and private electric utilities in 1981 changed as the Senate and presidency came under Republican control. Democrats still controlled the House of Representatives, which likely limited many policy changes. Furthermore, economic realities such as the continuing existence of stagflation may have served as another factor limiting any changes in policy toward private electric utilities and FERC.

From the end of 1980 through the end of 1981, the average nominal national retail rates for electricity in the country increased by roughly 17%, and average real national retail rates grew by nearly seven percent (Table 4; U.S. Energy Information Administration, 2012). Responding once again to these sizable rate increases as well as other issues, members of Congress introduced 25 bills in 1981 (Tables 16 and 17; Thomas, 2013d). One bill, H.R. 830 introduced by Representative James M. Collins (R-TX), would have eliminated the Department of Energy and transferred FERC to the Department of Interior, but the bill died in committee (Congressional Research Service, 2013a). Three bills, H.R. 3002 [sponsored by Representative Richard L. Ottinger (D-NY)], H.R. 3447 [sponsored by Representative Don Fuqua (D-FL)], and S. 1021 [sponsored by Senator James A. McClure (R-ID)], would have authorized funding for energy conservation, storage, and renewable energy as well as appropriations for FERC (Thomas, 2013d). The Senate passed its version of the Regulatory Reform Act S. 1080 [sponsored by Senator Paul Laxalt (R-NV)], but the House did not consider the bill (Thomas, 2013d).

Although it may well be that H.R. 3002, H.R. 3447, S. 1021, and S. 1080 all were introduced and considered in part due to the cost of electricity, relatively little proposed legislation evidently was designed to directly address the problem of high electricity rates, perhaps reflecting divided government. In the meantime, for fiscal 1982 Congress appropriated \$76.177 million for FERC (Table 15), a modest one percent increase over the previous fiscal year (P.L. 97-88; 95 Stat. 1145; Office of Management and Budget, 1984, p. I-J12; Federal Energy Regulatory Commission, 1983a, p. 3). Although the Republican president and Senate

were in part responsible for holding the line on government spending, President Carter had also tried to rein in government spending.

The official FERC fiscal 1982 budget request approved by the Reagan administration was for over \$82 million (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, Development, 1981, p. 1503). Yet, Congress ultimately appropriated nearly \$6 million less than requested. Perhaps legislators, particularly Democrats in the House, may have feared that the increased budget request was tied to the Administration's proposal to eliminate the Department of Energy, as such elimination would likely require consolidating aspects of energy regulation in FERC and would require more funding for the Commission. Meanwhile, Acting Chair Sheldon told the House Subcommittee on Energy and Water Development that FERC was continuing its efforts to improve efficiency and responsiveness by making procedural changes including computerization of agency files, elimination of unnecessary forms, and delegation of more authority to the office directors (pp. 1503-1504). Finally, she argued that the budget request was required due to the Commission's regulatory responsibilities, including enforcement of provisions of the Federal Power Act and PURPA (p. 1541).

Sheldon also made a number of points related to FERC's budget request for FY 1982 before the Senate Subcommittee of the Committee on Appropriations. Her testimony indicated that the Commission had seen a substantial increase in its regulatory workload in electric power regulation due in part to inflation as higher costs throughout the economy forced utilities to apply for higher wholesale rates (U.S. Congress. Senate. Committee on Appropriations. Subcommittee of the Committee on Appropriations, 1981, p. 1283). She also indicated that costs were increasing in electric power regulation due to inflation and the new regulatory provisions of PURPA (pp. 1283, 1315). Senator John C. Stennis (D-MS) agreed that FERC needed the money it was asking for to adequately perform its regulatory responsibilities (p. 1301), while Subcommittee Chair Mark Hatfield (R-OR) vowed to work with FERC to achieve the Administration's promise to clean up the regulatory problems that had damaged the economy and cost taxpayers money (p. 1303). Finally, Sheldon testified that the Reagan administration proposed through the passage of federal legislation to increase the size exemption for hydroelectric power plants under certain provisions of the Federal Power Act in order to relieve

some of FERC's regulatory burdens and to speed up other regulatory processes at the Commission (p. 1311).

Some legislators sought to figure out how to deal with the longer term problems the utility industry faced. In a hearing before the House Subcommittee on Energy Conservation and Power, then President John E. Bryson of the California Public Utility Commission (CPUC) suggested that the future of the electric utility industry might include careful deregulation of electricity generation (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1982b, p. 73).¹³⁰ At the same hearing, FERC Commissioner Matthew Holden, Jr. testified that deregulation would not work because too many existing electricity generation plants made the market unattractive, and deregulation would necessarily result in wheeling problems that the Commission could not resolve easily for technical reasons (pp. 77-78).

Another hearing before the House Subcommittee on Energy Conservation and Power examined issues related to small power production, cogeneration, and proposed deregulation possibilities under PURPA (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1981). At the hearing, John B. O'Sullivan, FERC's Chief Advisory Counsel, testified that the Commission opposed lifting regulations on the 50% ownership restriction for utilities on qualifying facilities, and he noted that the Agency did not believe that rate deregulation for such utility-owned facilities would serve the public interest or create more competition (p. 485). O'Sullivan suggested that the Commission did favor, however, shifting the regulation of cogeneration and small power production facilities to the states in part since FERC did not have the time or the financial resources to regulate them (p. 485). In a related matter, Glenn J. Berger, an advisor and legal counsel supporting O'Sullivan, testified that the only state not to develop rules and regulations to implement relevant PURPA provisions was Georgia; even the state of Mississippi, which was suing the federal government over PURPA, had indicated it was complying (p. 486). Representative Richard L. Ottinger (D-NY), the Chairman of the Subcommittee, commented that some states opposed the Commission proposal to increase the size limit for small power production facilities (p. 524). Finally,

¹³⁰ Bryson is a lifelong Democrat, and he was the first person I found that actually advocated for deregulation of electricity generation.

Ottinger pressed O’Sullivan on whether Congress should deregulate elements of PURPA. O’Sullivan replied that Congress should grant FERC more regulatory authority to order wheeling to ensure the sale of electricity from qualifying facilities, since at the time the federal courts considered wheeling and interconnection orders voluntary (p. 526).

FERC’s First Full Year under Chairman Butler – 1982

Clearly, at least some in Congress tried to address both high electricity rates and the regulatory problems associated with FERC. These efforts led legislators to consider deregulating some PURPA provisions and the generation of electricity overall. FERC seemed unenthusiastic about the prospects of deregulation and focused instead on encouraging Congress to give the Commission the regulatory authority it needed to issue orders to private electric utilities requiring transmission interconnection and wheeling for electricity created by qualifying facilities. In this context FERC began its first full year of operation under the leadership of Chairman Butler.

In 1982 FERC issued 10 orders (Tables 19 and 20) and 12 opinions (Tables 21 and 22). Four of the orders implemented various changes to provisions found in PURPA, three revised forms, two were administrative, and one related to the delegation of authority. Ten opinions were related to the wholesale ratemaking process and two involved elements of transmission including wheeling and transmission rates.

For reasons that will be clearer below the total number of docketed cases went up substantially in 1982 increasing by 48% over 1981 (Tables 24-27). Of the electricity cases, 62% were “ER” rate decisions, and 15% were “QF” qualifying facility status cases (Federal Energy Regulatory Commission, 2011). Another 10% were “ES” security and liability decisions (Federal Energy Regulatory Commission, 2011). The ER and ES cases made up 71% of the total number of electricity decisions, suggesting that inflation continued to push electric rates and costs upward. It also appears that individuals, small businesses, and multinational corporations remained interested in getting a qualifying facility designation from FERC for either their small power production or cogeneration facilities. ALJs decided 16% of the cases, the Commission 47%, and the office directors 36%; the Commission’s efforts to delegate more authority to the office directors continued.

Congressional Response in 1982

One likely reason why FERC's electricity docket grew so much in 1982 was the increase in electricity rates. The average nominal national retail electricity rate grew by 11% from 1981 to 1982, and the average real national retail electricity rate rose five percent (Table 4; U.S. Energy Information Administration, 2012). This same period saw a 75% annual increase in docketed cases with the ER prefix.¹³¹

Because proposed legislation is a lagging indicator of the economy, it would be another year before Congress reacted to the higher electricity rates. At least some of the 36 bills introduced responded to higher electricity rates (Tables 16 and 17; Thomas, 2013e). Representative Thomas J. Corcoran (R-IL) sponsored H.R. 5363 granting the authority to suspend a wholesale electric rate schedule to anyone working at FERC and gave the Commission the authority to waive rehearing in such cases so aggrieved parties could immediately challenge rulings in federal court; the bill died in subcommittee (Thomas, 2013e). Meanwhile, H.R. 5755, sponsored by Representative Tom Harkin (D-IA) and a similar bill sponsored by Senator Howard Metzenbaum (D-OH) would have limited the use of Construction Work in Progress (CWIP) clauses; both bills died in committee (Thomas, 2013e). H.R. 7229 [sponsored by Representative Paul Findley (R-IL)] also would have further restricted the use of automatic fuel adjustment clauses; the bill also died in committee (Thomas, 2013e). All of these bills dealt with limiting electricity rate increases and suggest bipartisan concern over electricity rates.

The fiscal 1983 budget was not adopted on time, likely reflecting divided government. Once a budget was adopted, however, Congress appropriated \$79.665 million for FERC a 4.5% increase over the FY 1982 budget (Table 15), and it directed \$79.193 million for the performance of its regulatory responsibilities (Office of Management and Budget, 1985, p. I-J14; Federal Energy Regulatory Commission, 1984a, p. 3).

One potential source of conflict may have been the Administration's proposal, supported by some Republicans in Congress, to dismantle the Department of Energy and to shift some of the Department's regulatory powers over private electric utilities and budget to FERC. On February 18, 1982, the House Subcommittee on Oversight and Investigations held a hearing examining the Reagan administration's proposal to eliminate the Department of Energy as part

¹³¹ In 1981, according to Lexis Nexis Academic, 285 cases with an ER prefix related to wholesale or transmission rates, while in 1982 498 cases had the same prefix, a 75% increase. One would expect that the number of docketed ER cases would increase in a year when electricity rates also increased.

of a larger strategy to deal with expanding federal budget deficits (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Oversight and Investigations, 1982). Democrats in the House did not favor abolition of the Department for a variety of reasons, including that they did not see it a major source of budgetary savings. Meanwhile, in testimony before the House Subcommittee on Energy and Water Development, Chairman Butler requested an FY 1983 budget of \$92.5 million, nearly half of which was to be offset by filing fees and user charges imposed by the Commission; Congress ended up appropriating almost \$13 million less than the request (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1982).

Congress was concerned as well with a number of other issues. For example, the Senate Subcommittee on Energy Regulation held a hearing to determine whether legislation should be adopted amending PURPA to allow utilities to own 100% of a qualifying facility, rather than the 50% under FERC rules (U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Regulation, 1982). Next, the House Subcommittee on Energy Conservation and Power held a hearing on the best way for FERC to regulate the electric utility industry including whether it should act as a least cost regulator since the industry was struggling financially and some utilities were going bankrupt (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1982a). The Subcommittee also considered legislation designed to address a D.C. Circuit court decision, *American Electric Power v. FERC* [675 F.2d 1226 (1982)], that threw out FERC's rate rules for the purchase of electricity by a utility from a qualifying facility (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1982).¹³² Much like most of the issues of concern to FERC in 1982, Congress seemed to concentrate on issues relevant to electricity rates or to utility costs.

Stagflation Ends: 1983

FERC Reacts in 1983

Just as FERC and Congress were becoming ever more concerned about the increasing costs of electric utilities, something extraordinary happened. Stagflation ended somewhere between the end of 1982 and the first few months of 1983. The end came after the Federal Reserve, under the leadership of Chairman Paul Volcker and in agreement with the Reagan

¹³² Ultimately, the U.S. Supreme Court reversed the D.C. Circuit [103 S. Ct. 1921 (1983)].

administration, raised interest rates until the country went into a sharp recession. The recession effectively ended stagflation, lowering prices throughout the economy including in the private electric utility sector and resulting ultimately in an economic boom. As with Congress, it would take time for the Commission to catch up to the newer national economic realities.

Similar to legislation, FERC's orders and opinions are lagging indicators of what had happened rather than projections of the future. Thus, FERC's orders in 1983 reflected the increasing rates linked to stagflation rather than the new high growth and low inflation economy. In 1983 FERC issued seven orders (Tables 19 and 20) and 21 opinions (Tables 21 and 22). Two of the orders were administrative, one related to CWIP clauses, one focused on fuel adjustment clauses, one revised a form, one changed the deadline for a provision in PURPA, and another clarified FERC's authority to suspend wholesale rates. Reflecting the rearview nature of Commission opinions, in 1983 cases flooded FERC. Of the 21 opinions issued in 1983, 13 dealt directly with wholesale rate matters; three others handled transmission issues, with others examining electric service tariff and spent nuclear fuel costs, the terms and conditions of wholesale service, the termination of an unused rate schedule, the waiver of rules for an automatic fuel adjustment clause, and ratemaking in a safe harbor transaction.

Although FERC's orders and opinions largely reflected what had occurred prior to the economic changes following the end of stagflation, the Agency's docketed casework mirrored the country's changing economic circumstances. In 1983, the Commission's docketed decisions declined by 22% from 1982 (Tables 24-27). Of the total number of decisions, those with electric-utility related prefixes increased from 1982. However, the number of "ER" rate decisions declined by 17%. Prior to 1983 the number of rate cases had increased every year along with rates and costs. Meanwhile, there was an 85% increase in qualifying facility "QF" status decisions. Other areas of growth in FERC's docket included a 59% increase in formal filing "EL" decisions, and a 71% increase in "EC" sale, purchase, or merger decisions. At the same time, ALJs decided 16% of the cases, the Commission 42%, and office directors 42%.

Beginning in 1978, docketed decisions with an "ER" prefix made up 56% of all electricity decisions; in subsequent years the number of decisions went up each year until 1983 when it began to decline. The increasing number of "ER" decisions largely matched the increasing retail electricity rates between 1978 and 1982, and the number of decisions began to decrease in 1983 as real retail rates began to decline. Based on the growing proportion of

decisions that office directors handled, their share of the workload grew every year from 1978 through 1983; it would appear that the Commission succeeded in delegating more authority to the directors. Finally, FERC implemented Section 201 of PURPA as growth in the number and percentage of “QF” decisions made between 1980 and 1983 demonstrated.

Congress Remained Stuck in the Past in 1983

In line with congressional desires, FERC focused much of its efforts in 1983 on implementing sections of PURPA, reducing and clarifying the paperwork requirements for private electric utilities, providing stricter guidelines for the use of CWIP and automatic fuel adjustment clauses, and dealing with issues related to transmission and wholesale electricity rates. Meanwhile, consistent with its reactive nature, Congress spent much of the year responding to the high rates associated with electric utilities in 1982. It did not seem to recognize, perhaps due in part to the subtlety of the decline and increases in nominal rates, that the average national real electricity rate declined by almost one percent in 1983 (Table 4; U.S. Energy Information Administration, 2012).

Legislators introduced 63 bills in 1983 that contained references to the Federal Energy Regulatory Commission (Tables 16 and 17; Thomas, 2013f). Of these, three¹³³ would have established the terms and conditions under which FERC included construction-work-in-progress (CWIP) clauses in the wholesale rate structures of electric utilities; all of the bills died in committee or subcommittee after a Senate hearing was held on the subject (S. Hrg. 98-1068; Thomas, 2013f). Two other bills¹³⁴ would have limited the amount FERC could charge for a license for the use of a federal dam or other federal waterway projects; neither bill was approved (Thomas, 2013f). Furthermore, S. 2150, introduced by Senator Gordon J. Humphrey (R-NH), would have required that FERC give preferences when awarding permits and licenses for the use of waterway projects; the bill died in committee (Thomas, 2013f). Ultimately, however, Congress did approve \$89.582 million for FERC for fiscal year 1984 (Table 15; P.L. 98-50; 97 Stat. 258), a 12% increase over the Agency’s FY 1983 appropriation (Office of Management and

¹³³ The bills included H.R. 555 introduced by Representative Tom Harkin (D-IA), S. 817 introduced by Senator Howard Metzenbaum (D-OH), and S. 1069 introduced by Senator John Chafee (R-RI).

¹³⁴ The bills were H.R. 3660 introduced by Representative Thomas Foley (D-WA) and S. 1132 introduced by Senator James A. McClure (R-ID).

Budget, 1986, p. I-J15; Federal Energy Regulatory Commission, 1985a, p. 4). Congress also made a supplemental appropriation of \$3.488 million for FY 1983 (P.L.98-63; 97 Stat. 316).

Although a number of bills related to FERC in 1983 were introduced, as Gormley (1986) would have predicted few received serious consideration. Instead, Congress opted to express its priorities for the electric utility industry through the passage of increased appropriations for FERC. In testimony before the House Subcommittee on Energy and Water Development on FERC's fiscal 1984 appropriation, Chairman Butler reported that the Commission was about \$6 million short for FY 1983, causing the agency to cut staff (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1983, p. 251). The shortage of funding occurred due to a budget impasse in 1983 that led to funding through a continuing resolution, and the Commission received nearly \$13 million less in FY 1983 than it initially requested. To address the funding problem Congress ended up passing a supplemental budget appropriation.

Additionally, Butler's testimony noted that FERC had seen a productivity increase of ten percent over two years according to a GAO study (p. 238). A legislator commented that several southern states had intervened in a wholesale rate proceeding at FERC, and Butler testified that states should not have greater authority over wholesale rate matters because such authority might create interstate reliability problems for the electric grid (p. 255). Another member of the subcommittee focused on FERC's new rule on the use of CWIP clauses; Butler expressed concern that if the rule were too restrictive it would feed a growing tendency of private utilities to be risk averse in the development of new facilities, resulting in reliability problems when needed new facilities were not built (p. 261). Butler also testified that PURPA had encouraged the use and development of small hydroelectric facilities, and the law had largely been responsible for FERC's increased workload with private electric utilities in 1983 (pp. 259-260, 273).

While some in Congress reviewed funding issues, Commission productivity, state wholesale rate authority, CWIP clause rules, the effects of PURPA, and FERC's workload, talk began about the potential opportunity to deregulate elements of the private electric utility industry. Such discussion started at least as far back as 1982 when John Bryson testified that the deregulation of electricity generation might be worth considering if it were done correctly. FERC seemed less than enthusiastic about the idea at the time, but it generated a study by the

Congressional Research Service. The study found that a number of legal and political hurdles dimmed the prospects for full deregulation; however, it indicated that regulatory reform or partial deregulation should be selected based upon which choice was more likely to produce the best outcomes for consumers, regulators, and the utility industry itself (Congressional Research Service, 1983, pp. 122-123).

FERC Continues to Change in 1984

As Congress continued to oversee Commission activities and to consider regulatory changes for private electric utilities, FERC confronted other issues. First, by the end of 1983 Chairman Butler had resigned and returned to private industry, and FERC had a new appointed chairman, Raymond J. O'Connor (Federal Energy Regulatory Commission, 2013b). Next, it was not clear what changes Congress had in mind for the regulation of private electric utilities, what the changes would mean for FERC, or if any legislative changes would actually occur. Moreover, the Agency needed to consider ways to supplement its budget as federal deficits and debt made future budgetary requests to Congress more difficult.

In this context FERC issued seven orders (Tables 19 and 20) and five opinions (Tables 21 and 22) related to the private electric utility industry in 1984. As Table 20 indicates, two orders dealt with fees and charges; one was administrative; one involved delegation to the office directors; one concerned generic determination of the rate of return on common equity by a utility; one related to an application for someone holding interlocking directorate positions; and one was relevant to the implementation of section 206 in PURPA. FERC still focused on implementing PURPA and on taking measures designed to further improve its performance. The Agency also began to emphasize establishing user fees and other charges to help self-fund the Commission and help buffer against future federal budget cuts. Meanwhile, four dealt specifically with matters pertaining to wholesale rates, another examined costs related to subtransmission facilities.

In 1984 FERC issued a total of 2,427 docketed decisions, 34% of which had electric utility-related prefixes (Tables 24-27). The total number of decisions declined by eight percent over the previous year, with electricity cases dropping two and a half percent. Of the electricity cases, 44% had the "ER" prefix pertaining to rates, and 33% dealt with the qualifying status of small power production and cogeneration facilities ("QF"). The number of ER decisions declined 12%, while the volume of QF decisions increased by 21%, suggesting that costs

declined as inflation ebbed and fewer utilities were involved in electric rate cases. The increase in the number of QF decisions indicated a growing level of support for the development of such facilities. Relatedly, the number of “ES” cases (involving the issuance of securities or assumption of debt) remained essentially flat. This indicates that demands for new infusions of capital for utilities through either securities or borrowing had stabilized, after peaking at 113 decisions in 1981, perhaps due in part to the lack of inflation. FERC’s continued efforts at increasing delegation appeared to be paying off as well, as the number of decisions issued by the Commission dropped 12%, while the number of decisions office directors handled increased nearly five percent.

Congress Reacts to Economic Stability in 1984

By 1984 it was relatively clear that stagflation had ended, and the economy began a boom that would last until the end of the 1990s. The economic improvements seemed to have a positive impact on private electric utilities as well. In 1984 of the 134 private electric utilities that had bond ratings, 62% had an A- or better rating; 46 were able to improve their ratings, while only 10 saw their ratings decline (Congressional Research Service, 1991, p. 77; see Table 30). Another economic indicator showing improvement for private utilities overall was the average debt-to-equity ratio.¹³⁵ These positive economic trends for utilities may well have played a role in the slight (0.8%) decline in average national nominal retail rates and the more impressive four percent decline in average national real retail rates between the end of 1983 and the end of 1984 (Table 4; U.S. Energy Information Administration, 2012).

Even so, in 1984 legislators introduced 29 bills that specifically included references to the FERC (Tables 16 and 17; Thomas, 2013g). Of these, six dealt with various elements of the licensing process for hydroelectric projects,¹³⁶ four sought to address the problem of acid rain

¹³⁵ In 1970 the debt-to-equity ratio was 65/35, in 1974 it was 66/34, in 1980 63/37, and in 1984 58.6/41.4 (p. 79; Table 28).

¹³⁶ The six bills included H.R. 5299 introduced by Representative Richard Ottinger (D-NY), H.R. 5416 introduced by Representative Albert Gore (D-TN), H.R. 6198 introduced by Representative James Jeffords (R-VT), S. 2710 introduced by Senator Malcolm Wallop (R-WY), S. 2711 introduced by Senator Bennett Johnston (D-LA), and S. 3006 introduced by Senator Daniel Evans (R-WA) (Thomas, 2013g).

caused by burning coal,¹³⁷ and two were amendments in the House and Senate to bills on the use of CWIP clauses (Thomas, 2013g).¹³⁸ Another bill [H.R. 4766, introduced by Representative Ed Bethune (R-AR)] would have required large utility rate increases to wait at least one year before going into effect after being approved by FERC (Thomas, 2013g). Finally, H.R. 4923 [introduced by Representative Tom Harkin (D-IA)] would have required FERC to hold hearings ensuring that utilities were using least cost plans (Congressional Research Service, 2013b), and H.R. 5608 [introduced by Representative Robert T. Matsui (D-CA)] would have given FERC the authority to order the mandatory wheeling of electricity (Congressional Research Service, 2013c). None of these bills passed.

For fiscal year 1985, however, Congress appropriated \$95.677 million for FERC (Table 15) and gave the Agency the authority to keep revenues collected from user fees, inspections, and licenses (P.L. 98-360; 98 Stat. 416-417). Due to the authority to use revenues it collected, the Agency had nearly \$99.37 million available to spend, and it spent more than \$97.5 million on operations in FY 1985 (Office of Management and Budget, 1987, p. I-J16; Federal Energy Regulatory Commission, 1986a, p. 5). The total amount spent in FY 1985 represented nearly a nine percent increase over the amount appropriated for the previous fiscal year.

From the legislation introduced and FERC's budget, it would appear that at least some members of Congress were concerned with wholesale electricity rates, environmental problems caused by burning coal to generate electricity, and the Agency's regulatory procedures and authority. Only one bill dealt specifically with rates (H.R. 4766), and it focused only on large wholesale rate increases. The amendments on CWIP clauses simply continued past efforts to decide how broadly such clauses should be used. Meanwhile, the acid rain legislation suggested that a shift might be underway. Recall that when the federal government initially mandated the use of coal rather than natural gas or oil to fire power plants, many legislators recognized that coal would cause environmental problems but agreed because of the nation's economic

¹³⁷ The four acid rain bills included H.R. 4906 introduced by Representative Matthew J. Rinaldo (R-NJ), H.R. 5370 introduced by Representative Morris Udall (D-AZ), H.R. 5794 introduced by Representative Dennis Eckart (D-OH), and S. 2215 introduced by Senator John Glenn (D-OH) (Thomas, 2013g).

¹³⁸ The House amendment introduced by Representative Carlos J. Moorhead (R-CA) was H.AMDT.592 to H.R. 555, while the Senate amendment introduced by Senator John Chafee (R-RI) was S.AMDT .6491 to H.J. RES .648 (Thomas, 2013g).

problems. The improved economy in 1984 meant that legislators could afford to revisit the use of coal and put into place policies designed to limit the impact of burning coal to produce electricity. Questions about how FERC should regulate hydroelectric projects also remained, stemming in part from how different legislators viewed how FERC should regulate small hydroelectric projects under PURPA. Another issue that received attention was finally granting FERC the authority to mandate compulsory wheeling to provide an avenue for the use of more electricity from non-electric utility sources.

An appropriation hearing held by the House Subcommittee on Energy and Water Development for FERC's FY 1985 budget addressed several points relevant to electric utilities (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1984). Chairman O'Connor testified that the Agency was focusing on improving its internal management, developing a generic rate of return factor for determining just and reasonable wholesale electricity rates, and undertaking a bulk power experiment where the area involved would provide wheeling access to all participants to see if competition in electricity generation among utility and non-utility generators could work (pp. 350-353). O'Connor also indicated that FERC hoped to establish a more generous CWIP policy to provide incentives to utilities to build much needed new generation facilities to ensure long-term grid reliability (p. 353). Contrary to what many legislators wanted, however, the more generous CWIP policy necessarily would result in higher retail rates at the state level and in higher wholesale rates at the federal level. O'Connor argued that without the higher rates utilities would not build new generation facilities and as a result reliability would suffer (p. 353). During the question and answer period, legislators seemed most interested in FERC's regulatory activities generally (pp. 371-372), overall case backlog (p. 460), establishment and use of fees to provide budget support (p. 468), and effort to move toward an automated recordkeeping system (p. 483). Legislators did not focus on private electric utilities specifically and instead examined general administrative questions, and issues involving hydroelectric power and natural gas. Perhaps the lack of discussion directly relevant to private utilities was due to better national economic circumstances.

In another hearing Chairman O'Connor was asked to comment on a bill [H.R. 5766, sponsored by Representative Richard Ottinger (D-NY)] designed to establish regional electricity regulatory bodies. Much to the chagrin of Representative Ottinger, O'Connor opposed the

legislation (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1985b). The FERC Chair contended that the establishment of regional regulatory entities for electricity would increase the likelihood of establishing regulatory conflicts that could hinder the market (p. 59). Furthermore, he opposed the transfer of wholesale jurisdiction from FERC to the states because it would create more classes of customers, which would in turn make discrimination in the provision of services or rates more likely (p. 60). O'Connor's last major complaint was that the bill contained a provision providing authority to FERC to order mandatory wheeling for states that belonged to a regional regulatory body (p. 60). O'Connor maintained that FERC should either have the authority to issue mandatory wheeling orders to all states or it should not have the authority to do so for any state in order to avoid complications and confusion. If the bill were adopted as written, it would result in multistate conflicts and interstate commerce problems (p. 60). Throughout much of the rest of the hearing the FERC Chair argued with Ottinger over whether the bill should be adopted, and O'Connor recommended a number of changes to the bill. Although the proposed legislation ended up dying in committee, it demonstrated that some legislators still sought better ways to regulate and organize the electric utility industry.

Two other congressional hearings addressed topics that continued to be concerns. The first was a hearing of the Senate Subcommittee on Energy Regulation and Subcommittee, chaired by Frank Murkowski (R-AK), on potential changes in the use of construction work in progress clauses. O'Connor's testimony focused on two different approaches for a utility to recover the financing costs of electric facility construction, both of which allowed utilities to recover 100% of all "prudently incurred" costs (U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Regulation, 1984, p. 60). Additionally, the FERC Chair discussed how the 1983 CWIP rule worked, explaining that the Agency required each utility seeking a CWIP clause to prove it was entitled to such a clause; such clauses could be subject to negotiation with ratepayers, or in the absence of such negotiations they could be resolved through administrative adjudication (p. 67).

In a second hearing before the House Subcommittee on Energy Conservation and Power, O'Connor testified about siting and environmental issues related to small hydroelectric projects encouraged in PURPA (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1984). Clearly, the small hydro facilities had

had an environmental impact on wetlands, particularly in the northwestern United States, and members asked O'Connor what might be done to resolve the problem (p. 175).

Throughout 1984 at least some in Congress remained concerned with whether and how CWIP clauses should be used and how the electric utility industry should be structured and regulated in the future. At the same time, other legislators focused on the environmental impacts of small hydroelectric facilities and of acid rain caused by coal fired power plants.

FERC's Response to Congressional Complexity in 1985

For FERC, 1985 was a year of both continuity and some important changes. President Reagan was re-elected as were the Republican majority in the Senate and the Democratic majority in the House. This meant the Commission could reasonably expect the policy approach of the Congress and the President to be relatively stable. One notable exception was growing legislative support for addressing the environmental problems caused by the generation of electricity. Meanwhile, the economy continued to grow rapidly after emerging from stagflation and allowed legislators greater flexibility to deal with environmental problems.

In this policy environment, FERC had to figure out the issues to focus upon. It issued only five electric utility-related orders (Tables 19 and 20) and four opinions (Tables 21 and 22) in 1985. Perhaps this was due to the Reagan administration effort to push agencies to issue fewer rules and regulations and to cut the number of pages in the CFR. Of the five orders, two revised forms, two others clarified the generic rate of return formula for utilities, and one involved fees and charges. The paperwork revision orders streamlined and consolidated required information on forms, fitting in nicely with efforts to limit paperwork in the "Paperwork Reduction Act of 1980" (P.L. 96-511, 94 Stat. 2812). As mentioned earlier, FERC had been working on a generic rate of return formula in concert with Congress as a way to diminish the Agency's workload and to expedite wholesale ratemaking cases. Moreover, FERC continued to establish more fees and charges as a means of providing additional revenue. At nearly the same time, FERC issued four opinions (Table 22) relevant to private electric utilities, including one that involved whether a utility could seek to recover costs through wholesale rates because of a canceled nuclear power plant, another that examined the allocation of costs for a nuclear power plant, one that dealt with transmission rates, and another examining the conditions under which power could be purchased from qualifying facilities.

The limited number of opinions suggests the influence of either the Reagan administration or Congress.¹³⁹ It is unclear whether or to what degree better economic circumstances had an impact on the number of orders and opinions FERC issued in 1985. The improved economy clearly did have an impact on the number of docketed cases before FERC. The Agency saw a nine percent increase in docketed decisions over the previous year; almost all of the increase was due to electricity filings (Tables 24-27). The total number of electricity-related decisions rose 23% compared to 1984. In the past such an increase evidently indicated severe economic problems in the electric utility industry, but by 1985 the increase likely reflected an improving economic environment. Rate decisions with the prefix “ER” declined five percent from the previous year, and security and debt related cases (“ES”) decreased eight percent. Meanwhile, the largest increase (103%) occurred in qualifying facility status decisions (“QF”).

In 1985 QF prefixes made up 55% of the total number of decisions, those designated ER 26%, ES seven percent, and EL nearly five percent, while office directors made 63% of the decisions, ALJs 11%, and the Commission 26%. Such figures reflect an improving economy and a dramatic shift in cases away from rate, security, and debt issues and toward growing support for the development of qualifying facilities.

Congress Responds in 1985

FERC issued significantly fewer orders and opinions as the economy improved. The Agency generally shifted its focus toward more informal decision making and toward an expanded use of qualifying facilities as PURPA provided, changes Congress had encouraged. At the same time, at least some legislators were still considering the longer term regulatory and industry structure of private electric utilities; they remained concerned with factors such as CWIP clauses that might increase rates. Although still somewhat concerned with rates, others focused on the environmental impact of electricity generation. At the same time, retail electricity rates essentially had flattened. From the end of 1984 until the end of 1985 the average national nominal retail rate of electricity increased three percent, while the average national real retail rate saw no change (Table 4; U.S. Energy Information Administration, 2012).

¹³⁹ Reagan asked the agencies to limit rulemaking whenever possible, and Congress may have encouraged the Agency to cut back on its rules with the Paperwork Reduction Act (P.L. 96-511, 94 Stat. 2812) and by requesting the use of expedited informal regulatory processes and more delegation.

Members of Congress introduced 43 bills (Tables 16 and 17) in 1985 that referred directly to FERC (Thomas, 2013h). Of these bills, one [H.R. 1229, introduced by Representative Pete Stark (D-CA)] would have established additional rules and procedures for the use of CWIP clauses, and another [H.R. 1314, introduced by Representative James Jeffords (R-VT)] would have transferred to the states the authority to license small hydroelectric projects under a certain size (Thomas, 2013h). Additionally, H.R. 2231 [introduced by Representative Peter H. Kostmayer (D-PA)] would have granted FERC the authority to issue mandatory wheeling and transmission interconnection orders (Congressional Research Service, 2013d), and H.R. 3074 (introduced by Representative Jeffords) would have allowed states to enter into multistate compacts to coordinate and conserve electricity (Congressional Research Service, 2013f). Finally, Representative Byron Dorgan (D-ND) introduced H.R. 3018 and Senator Tom Harkin (D-IA) introduced S. 1457 to make the appropriate tax changes to address least cost planning for public utilities (Congressional Research Service, 2013e, 2013h). All of these bills died either in committee or in subcommittee. The rest of the legislation introduced that year, aside from budget bills, dealt directly with issues related to natural gas, hydroelectric power, or pipelines.

Although none of the substantive policy bills was adopted, Congress passed budget-related bills for FERC in 1985. First, in a supplemental appropriation (P.L. 99-88; 99 Stat. 368) Congress added \$1.627 million to FERC's FY 1985 budget for salaries and expenses; a House amendment [H.AMDT.82 introduced by Representative Vic Fazio (D-CA)] required FERC to exercise regulatory jurisdiction over a transmission project running between California and Oregon (P.L. 99-88; 99 Stat. 321). Later in the year Congress appropriated \$95.568 million for FERC in fiscal 1986 (Table 15; P.L. 99-141; 99 Stat. 575); however, the Commission's total funding availability was \$96.357 million and its total obligations \$93.589 million (Office of Management and Budget, 1988, p. I-J13; Federal Energy Regulatory Commission, 1986b, p. 6). For the first time in its history, FERC spent less than it had the year before, four percent less in FY 1986 than in FY 1985.

The hearing on appropriations for FERC in the House Subcommittee on Energy and Water Development examined several issues. First, to address environmental concerns related to small hydroelectric projects developed under PURPA, Chairman O'Connor requested funding to study the environmental impact of the Agency's hydro licensing program (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1985, p.

1038). Next, O'Connor stated that he wanted to improve agency management through further computerization, and he hoped to expedite wholesale ratemaking applications by streamlining the Commission's decision making process, establishing priorities, and tracking cases (p. 1038).

Both Representative Lindy Boggs (D-LA) and Subcommittee Chairman Tom Bevill (D-AL) asked the FERC Chairman about likely areas under the Commission's jurisdiction that might be deregulated (pp. 1039-1040, 1085). O'Connor responded that natural gas was being deregulated through decontrol and oil pipelines could be deregulated to reduce the Commission's workload; moreover, small hydroelectric project regulation under PURPA could be defederalized, turning regulation over to the states as H.R. 1314 would have done (p. 1039). The legislators considered deregulation and defederalization to lessen and better focus FERC's workload.

Representative John T. Myers (R-IN) asked whether it was a problem for utilities to buy back power that they did not need from cogenerators and how expensive such electricity was (p. 1078). O'Connor responded that it was a problem for utilities that already had a surplus of electricity and that the states determined the avoided cost rates for such transactions. States that tended to encourage the use of qualifying facilities had higher avoided costs, ultimately resulting in higher retail rates for consumers (pp. 1078-1079). The Chairman also acknowledged that large corporations owned and operated most of the qualifying facilities, and states could effectively regulate the existence of qualifying facilities by how generous their avoided costs were (pp. 1078-1079). In other words, if a state already had a surplus of electricity, it could create an avoided cost formula that would produce a low enough economic return to discourage the development or use of a qualifying facility. On the other hand, if a state needed more electricity it could establish a generous avoided cost formula to encourage the sale of electricity into the state by a qualifying facility.

In sum, what the hearing revealed was that PURPA served to increase retail electricity rates for consumers in states served by qualifying facilities; if those qualifying facilities were small hydroelectric projects many of the same states also had to address environmental impacts. Yet, when Congress passed PURPA it did so promising that it would lower costs for consumers, and it would help protect the environment from damage caused by generating, transmitting, and distributing electricity. FERC also continued to take a very restrained approach toward what

energy policy issues could be deregulated or defederalized, even though doing so would free it up to perform other regulatory activities.

Another hearing before the House Subcommittee on Energy Conservation and Power focused on FERC's CWIP rule and on the impact of utility facilities on fish and wildlife (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1985a). The Subcommittee Chair, Representative Edward Markey (D-MA), expressed his displeasure at how the CWIP clauses were used because he wanted to limit utilities' construction of new facilities to instances where the utilities had no other options (p. 482). Meanwhile, Representatives Carlos J. Moorhead (R-CA) and Richard Shelby (D-AL) both supported FERC's use of CWIP clauses to promote grid reliability and to ensure that utilities remained financially sound (pp. 484, 526). The differences in how legislators viewed the use of the clauses might have been ideological, regional, or reflected some other underlying factor. Meanwhile, Representative John Dingell (D-MI) congratulated O'Connor for his leadership at FERC in following the fish and wildlife requirements of federal law for utility-related facilities (p. 524). At the same time, Moorhead wanted FERC to streamline the licensing of alternative energy sources found under PURPA, some of the same sources (e.g., small hydroelectric projects) that were causing environmental problems in the Northwest (p. 483). Such evident contradictions among legislators made it difficult to implement policies in ways that would satisfy most members of Congress.

FERC Buffeted by Tumult in 1986

FERC not only found itself trying to cope with widening differences among legislators over how utilities ought to be regulated in 1986; it also became ensnared in a scandal that seriously affected the Agency's ability to handle its administrative responsibilities. The scandal involved charges of sexual harassment against an appointed attorney at FERC, who then accused the Agency's leadership of engaging in illegal activities (Garvey, 1993). These charges and countercharges served as the basis of a federal investigation of the Commission to determine if the alleged activities actually occurred and to punish anyone involved. To complicate matters further, FERC ended up having three different chairs before the end of the year. Chairman O'Connor left in January; interim Chairman Anthony G. Sousa served from February to October, and in October, the newly confirmed Chairwoman Martha O. Hesse took charge (Federal Energy Regulatory Commission, 2013b).

Despite these difficulties in 1986, the Commission issued four orders and six opinions relevant to the electric utility industry. One of the orders dealt with the competitive implications of CWIP clauses, one re-examined the generic rate of return formula for utilities on common equity, one created generic rules for those holding interlocking directorate positions, and one revised forms. The CWIP order responded to a federal appeals court decision vacating part of FERC's CWIP rules [*Mid-Tex Electric Cooperative, Inc., et al. v. FERC* 773 F.2d 327 (D.C. Cir. 1985)]. Meanwhile, of the opinions FERC issued, four dealt with wholesale rate cases, one examined questions surrounding a wheeling contract, and another was a transmission rate case. Overall, then, like the previous year, FERC issued very few orders or opinions in 1986. This may have had something to do with congressional or presidential actions; it also may have reflected the improving national economy and the problems at the Agency.

In 1986 the Commission issued 2,504 docketed decisions, a year-to-year decline of nearly six percent. Of these, electric utility related decisions experienced an annual decline of roughly nine percent (Tables 24-27). A majority of the decisions, 52%, had the QF prefix, a 14% decline from the previous year. The prefix with the next highest tally was ER, accounting for 26% of the electricity decisions, a decline of seven percent. Other prefixes worth mentioning included ES, with 8% of the decisions (an increase of nearly nine percent), and EL, with 6% of the decisions (an annual increase of 10%). ALJs issued 8% of the decisions, the Commission 29%, and the office directors 62%. Compared to 1985, the ALJs made 29% fewer decisions, the Commission had an increase of just one case (0.3%), and the office directors experienced a decline of nine percent.

Due to the extenuating factors mentioned above, it is important not to read too much into the number of docketed decisions in 1986. Looking just at the raw numbers, however, several conclusions might be drawn. First, it would seem that the novelty of getting a qualifying status for a small power production or a cogeneration facility was wearing off. Next, the modest decline in the number of rate decisions coupled with the increase in both the number and percentage of security and debt decisions may have indicated that the economic performance of electric utilities was leveling off (Tables 28-30). Moreover, the increase in the number of formal filings was likely the product of additional cases in which a utility or other entity challenged another over utility-related decisions, resulting in more court-like cases before the Commission.

Finally, much of the decline in the number of docketed decisions that office directors decided is likely attributable in part to the decrease in the number of qualifying status decisions.

Congressional Response in a Year Fraught with Controversy

Throughout 1986 Congress found itself dealing with a number of problems. First, the Reagan administration was embroiled in the Iran-Contra affair. Next, FERC was under investigation, limiting its ability to perform the regulatory functions for which it was created. Additionally, the economy was not as strong as it had been, and the overall financial performance of electric utilities began to reflect this. There also seemed to be a growing rift between legislators over the appropriate role of government and the kinds of activities the federal government should be engaged in.¹⁴⁰

From the end of 1985 until the end of 1986 the average national nominal retail electricity rate remained flat, while the average national real retail electricity rate declined by two percent (Table 4; U.S. Energy Information Administration, 2012). Constrained by all of the problems they faced in a congressional election year, legislators introduced only 27 bills in 1986 (Tables 16 and 17) that specifically referenced the Federal Energy Regulatory Commission (Thomas, 2013i). Of these, only three focused specifically on non-budgetary issues related to private electric utility regulation. One bill [H.R. 4669, introduced by Representative John W. Bryant (D-TX)] would have repealed the provisions of the Power Plant and Industrial Fuel Use Act of 1978 that prohibited the use of natural gas or petroleum to fire power plants (Congressional Research Service, 2013g). Another, S. 2010, introduced by Senator William Roth (R-DE), would have authorized FERC to exempt hydroelectric projects from certain paperwork provisions found in the Federal Power Act (Congressional Research Service, 2013i). Although neither bill passed, Congress enacted three others: S. 426, introduced by Senator Malcolm Wallop (R-WY); H.R. 44, introduced by Representative Richard Shelby (D-AL); and H.R. 5056, introduced by Representative John W. Bryant (D-TX). The first two became the “Electric Consumers Protection Act of 1986” (P.L. 99-495; 100 Stat. 1243), which required FERC to give equal consideration to environmental protection when considering whether to issue a license for a waterway project and to provide additional environmental oversight over small hydroelectric

¹⁴⁰ It would appear that stagflation had forced the legislators to accept certain policy choices and approaches, narrowing the potential for partisan and ideological conflict in the late 1970s and early 1980s like the use of coal to fire power plants. Once stagflation ended, the number of acceptable policy choices expanded, creating more opportunities for conflict.

facilities regulated under PURPA (100 Stat. 1243 & 1249). After the enactment of H.R. 5056 public utility holding companies were allowed to own interests in qualifying cogeneration facilities (P.L. 99-553; 100 Stat. 3087). The adopted legislation addressed growing concerns about the environmental impact of both large and small hydroelectric facilities. The legislation granting holding companies the right to own interests in qualifying cogeneration facilities was more of a surprise because there was far less talk about it in congressional hearings.

Meanwhile, Congress appropriated \$99.079 million for FERC's fiscal 1987 budget (Table 15; P.L. 99-500; 100 Stat. 1783-208 & P.L. 99-591; 100 Stat. 3341-208); however, the Agency's total funding for FY 1987 was \$102.427 million and its obligations were a little more than \$100 million (Office of Management and Budget, 1989, p. I-J14; Federal Energy Regulatory Commission, 1988, p. iv). Even more importantly perhaps, Congress enacted the Omnibus Budget Reconciliation Act of 1986 (P.L. 99-509; 100 Stat. 1890), which allowed FERC to collect fees and charges in the amounts necessary to pay for its total obligations in a fiscal year. In effect, this provision allowed the Commission to become a self-funding agency.

FERC faced staffing reductions and a more modest budget increase (about three and half percent) due to Gramm-Rudman-Hollings, which was put into place to control federal spending (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1986, p. 875). To help alleviate the potential staffing and budget problems FERC began to look at increases in fees and charges. Acting Chairman Sousa indicated that the electric utility industry was experiencing a period of profound change and urged FERC to keep up with those changes in ways that encouraged the creation and use of electricity (p. 876).

Another hearing before the House Subcommittee on Energy Conservation and Power examined why FERC had performed so few prudence reviews to determine the most efficient use of capital when a utility filed for a wholesale rate increase (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1986). Subcommittee Chairman Representative Edward Markey (D-MA) argued with both the Agency and his Republican colleagues over whether the Commission should perform more such reviews. The heart of the argument was not just wholesale rates, but also whether utilities should build new power plants. Markey generally opposed new power plants (likely for environmental reasons), and FERC and many Republicans in the Subcommittee wanted utilities to build new

power plants to improve grid reliability and reduce rates. This argument reflected the growing rift among legislators over the future of the electric utility industry and of FERC regulation.

The dance between those concerned with the environment and those focused on grid outcomes found further expression in a hearing on legislation related to acid rain. H.R. 4567, introduced by Representative Gerry Sikorski (D-MN), would have required FERC to give wholesale rate preferences to fuel sources that did not produce sulfur dioxide (which ultimately resulted in acid rain) in the generation of electricity (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy Conservation and Power, 1986, p. 510). Acting FERC Chairman Sousa opposed the rate preferences because they amounted to price discrimination, which was illegal under the Federal Power Act and contrary to how the industry had been regulated for sixty years (p. 510). Furthermore, he argued that subjecting FERC's decision making under part II of the Federal Power Act to decisions made by the Environmental Protection Agency, as the bill would have done, would have allowed the EPA to interfere and to override regulatory responsibilities Congress required FERC to carry out (p. 564). Adding complexity to the proceedings was Representative John Dingell (D-MI) who opposed a provision in the bill that would have prevented citizens from going to court to challenge specific provisions; both he and Sousa said they thought the provision barring access to the courts was unconstitutional (p. 593). The bill ultimately died in committee.

Although the previous bill if enacted would have created regulatory tensions between FERC and EPA, another proposal would have caused regulatory problems between FERC and the states. S. 1149, introduced by Senator Dale Bumpers (D-AL), would have given each state the ability to override FERC decisions related to electricity transactions performed by a holding company (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1987, pp. 147-148). In a hearing of the Senate Committee on Energy and Natural Resources, FERC representatives opposed the bill because it would have created conflict among the states over ratemaking decisions and could have prevented power pooling and its associated efficiencies (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1987, p. 148). This bill also died in committee.

Many of the issues Congress addressed in 1986 were complicated for both political and economic reasons. For example, it was conservatives in Congress, Senator Malcolm Wallop (R-WY) and Representative Richard Shelby (D-AL), who sponsored legislation that became law

requiring FERC to consider the environment when making decisions related to hydroelectric facilities. Passage of this particular law was likely part of a broader orientation change in many legislators away from the economy and toward the environment as concerns about stagflation ebbed. However, this rising concern about the environment did not always translate into the passage of legislation; in some cases it produced conflict between those who were concerned with grid outcomes and those who wanted to limit the environmental impact of the electric utility system as the debates over prudence reviews and H.R 4567 demonstrated. Also, as Congress moved further away from the end of the stagflation crisis, legislators became less focused on any one issue and more scattershot in their attention.

Network Responses, Federal Regulatory Equilibrium, and State Variations

The narrative has focused on the emergence and experience of crisis, how Congress responds and how FERC reacts to legislative actions. Throughout, I have mentioned the response and actions of other network participants. Since the theoretical framework mentions other network participants, federal regulatory equilibrium, and ongoing variations in the nature and extent of wholesale electricity competition among the states due to state regulatory changes and actions taken by the utility industry, it is important to at least briefly describe them.

Private Electric Utilities

First, utilities played a key role in the stagflation crisis. As electricity rates grew, driven in part by higher oil prices between 1970 and 1977, it helped to increase other prices in the economy. Utilities responded to higher oil and overall fuel prices by almost continuously requesting higher wholesale and retail electricity rates from the Federal Power Commission and the state public utility commissions, frequently resulting in rate pancaking. In response states created automatic fuel adjustment clauses to allow utilities to raise retail electricity rates within certain limits without needing additional approval from state public utility commissions. Utilities requested rate increases because they believed they needed to keep up with inflation to stay in business and avoid bankruptcy. Additionally, to encourage utilities to continue building new facilities both the states and the FPC established construction work in progress (CWIP) clauses allowing a utility to charge higher wholesale and retail rates in return for building new facilities. Cumulatively, all of the actions utilities took increased electricity rates to the point where public opposition pushed Congress to act.

Utilities played a key role then in precipitating the creation of the Federal Energy Regulatory Commission and the passage of PURPA. Once FERC was established, many utilities immediately began to file requests for wholesale rate increases or the ability to incur debt or to issue securities, much as they had done with the FPC. However, reflecting congressional opposition to their use, FERC restricted the use of fuel or CWIP clauses. At the same time, FERC relied on the utilities to provide financial and personnel support to the regional electric reliability entities and the North American Electric Reliability Council that were responsible for promoting and managing grid reliability.

Overall, FERC's perceived regulatory success or failure during this period was tied to the performance of private electric utilities. Since the days of the Progressives there has been a common understanding that the delivery of electricity was too expensive for governments to do themselves; instead throughout most of the country the federal government relied on private companies. Due in part to this, members of Congress measured FERC's success using electricity rates even though state governments established retail rate schedules, the average debt-to-equity ratios of the utility companies, net operating incomes, and company bond ratings. If any of those metrics declined, legislators typically demanded to know what FERC had done to solve the problem. This relationship can be seen most clearly with rates. Members of Congress constantly pressured the Commission to limit the use of CWIP and fuel adjustment clauses in determining wholesale rates, while utilities pushed FERC to let them include such clauses in their wholesale rate formulas so they could charge higher rates. Utilities likely also pressured Congress to require the Agency to reduce the amount of paperwork they had to fill out and to expedite their pending cases. This sometimes resulted in a love-hate relationship, in which utilities sided with FERC on regulatory reform and sued the Commission over decisions with which they disagreed.

State Public Utility Commissions

State public utility commissions also played a key part in the stagflation era. First, the PUCs established retail rate schedules for private electric utilities and had siting authority over all electric facilities. To allow utilities to recover more of their fuel costs, many state PUCs created automatic fuel adjustment clauses, which became part of the formula the commissions used to determine how much a utility could charge a retail consumer for electricity. Additionally, many state PUCs allowed utilities to use CWIP clauses to build new electric facilities; these became part of the retail rate formula and also resulted in higher retail electricity

rates. It was these higher retail rates and complaints from consumers that ultimately pushed Congress to create FERC and to enact PURPA. Ironically, neither the Federal Power Commission nor FERC had much control over retail rates as they fell under state jurisdiction.

For a variety of reasons, the state PUCs proved to be a thorn in the side of FERC during this era. In some cases members of state public utility commissions complained to Congress about FERC and its activities. In others PUC members suggested courses of regulatory action that FERC was not enthusiastic about, as such when John Bryson, then a member of the California Public Utility Commission, suggested that deregulation of electricity generation might make sense. And, of course, PUCs could make the Commission's job even more difficult when they decided to sue FERC in federal court, as occurred in *FERC v. Mississippi* [456 U.S. 742 (1982)] when the Mississippi PUC sued FERC over the implementation of PURPA.

Consumers

Whether one calls them consumers, constituents, or simply the general public, individuals played a pivotal role in Congress's and FERC's reactions to high electricity prices. Public demands for action clearly pushed Congress to reorganize the Federal Power Commission into the Federal Energy Regulatory Commission and to create the Department of Energy. They also spurred passage of the Public Utility Regulatory Policies Act of 1978 to develop new ways to generate and to conserve electricity as a means of driving down retail electricity rates. When the reorganization and the passage of PURPA did not immediately produce results, legislators continued to introduce legislation to address the high price of electricity even though passage was rare.

To provide something more tangible to help assuage this anger, PURPA added an Office of Public Participation within FERC and created a position to intervene (Intervenor) in Commission decisions on the public's behalf (P.L. 95-617; 92 Stat. 3148; § 212; § 319). Due to concerns both in Congress and in FERC over the Agency's ability to get through its casework in a timely manner, this intervenor position did not start operating until the early 1980s. FERC also responded to pressure from Congress to address some of the public anger by following more strictly the guidelines established in the Government in Sunshine and the Freedom of Information acts.

As stagflation began to ebb, so did the public anger. The resulting lack of consensus produced more conflict between those who were concerned with grid-related outcomes and those

worried about the environmental impact of the grid. To complicate matters further, members sometimes addressed grid outcomes in one bill, while focusing on environmental impact in another.

Qualifying Facilities

Qualifying facilities joined the private electric utility regulatory environment when Congress passed PURPA in 1978. Any individual, small business or multinational corporation that owned an electric generating facility falling under the law's definition could apply to FERC for qualifying facility status. Most of the electricity coming from such facilities was produced by generation facilities owned by large multinational corporations. Many corporations took advantage of this opportunity because it was another way to raise money, and the federal government provided tax incentives for owning and operating a qualifying facility. These facilities also were exempted from certain provisions of state and federal energy and environmental laws. However, explaining some of the variations in competition in wholesale electric power generation among the states, state PUCs, which developed the formulas for avoided costs, shaped the ability to raise money through such facilities. States with more generous avoided cost formulas tended to have more qualifying facilities or to be connected to such facilities in other states providing greater wholesale competition, while states with low avoided cost formulas tended to have few qualifying facilities and little competition. Because states selected avoided costs formulas, qualifying facilities often complained to Congress about states with low avoided cost formulas.

Regional Reliability Entities and NERC

In the midst of dealing with the problems associated with stagflation and electric utilities, one problem was beyond the authority of any government agency including FERC to address. All grid reliability issues had to be handled by the regional electric reliability councils and the North American Electric Reliability Council (NERC). The councils were staffed and funded by the utilities themselves. It was up to the councils to coordinate activities among electric utilities to prevent power blackouts. This became an issue once again after the New York City blackout of 1977. Interestingly, in this era FERC did not seem to engage in many activities with the councils, perhaps reflecting a lack of authority over grid reliability issues.

Other State and Federal Agencies

FERC not only did not seem to develop any informal relationships with the councils, it also did not forge informal relationships with other state or federal agencies. Since the state Departments of Environmental Quality and the federal Environmental Protection Agency largely were responsible for regulating the environmental impact of non-waterway-related electricity facilities, one might think that FERC would have tried to work closely with these agencies to produce the best possible outcomes for both the environment and utilities. Yet, very little evidence exists to suggest that FERC worked with these other agencies to cope with problems related to regulatory overlap and underlap when it came to regulating the environmental impact of utilities. Instead, FERC evidently sought to not inject itself into regulatory matters not under its direct regulatory jurisdiction. Similarly, FERC let the Forest Service deal with utility matters on federal land. FERC's approach might be explained in part by its heavy workload.

Federal Regulatory Equilibrium and State Variations

At the beginning of the stagflation crisis, federal regulation of private electric utilities was limited to the wholesale sale and transmission of electricity through the Federal Power Commission, which also could regulate the use of waterway projects. Private utilities still operated as monopolies that controlled all of the generation, transmission, and distribution of electricity within a given region. After passage of the Department of Energy Organization Act and PURPA, FERC was formed, and the federal government sought to decentralize the generation of electricity. As part of decentralization, FERC granted qualifying facility status to cogeneration and small power production facilities that qualified under PURPA. Based upon these principles a new federal regulatory equilibrium was established by the mid-1980s.

It was up to each state, however, to determine how much each qualifying facility could be paid through an avoided cost formula, and thus the state governments would serve as a limiting factor on how much wholesale electric power generation competition there would be in each state. Some states chose to provide a generous formula to encourage the development of such facilities, while others that had enough electricity made the formulas low so people would not be interested in developing qualifying facilities. In practical terms this meant that the states that encouraged qualifying facilities moved toward more decentralized and competitive electricity generation as PURPA contemplated and ironically had higher electricity rates as a result. States that discouraged qualifying facilities continued to operate their electric utility systems under the existing monopoly-based regulatory system.

Another source of the ongoing variations in wholesale competition among the states and utilities, aside from the differences in how utilities were regulated and operated, were the legislative efforts to push FERC to encourage utilities to join regional electric power pools, to interconnect their transmission systems, and to engage in wholesale electricity wheeling. If a utility belonged to a regional power pool, it could sell or buy electricity with other utilities in the pool. This was supposed to be a way for utilities to maximize the existing electricity among all of the pool members before building new facilities. New facilities proved to be both extremely costly (which is why states and FERC developed CWIP clauses) and hard to site (because the public had become more environmentally conscious and did not want new electric facilities built near their homes). Yet, all utilities did not belong to power pools, interconnect their transmission systems, or engage in wholesale wheeling, and FERC could not force them to do so. The Federal Power Act made such decisions voluntary, resulting in significant differences among states and utilities in the degree of interconnection and wholesale competition.

Summary

In response to stagflation and the problems that it caused for private electric utilities, Congress adopted the Department of Energy Organization Act (P.L. 95-91; 91 Stat. 565) and the Public Utility Regulatory Policies Act of 1978 (P.L. 95-617; 92 Stat. 3117). The former statute for private electric utility regulation made little difference as it largely involved procedural change. PURPA made more substantive changes as Congress responded to growing public opposition to increasing electricity rates and environmental damage caused by electric utilities. PURPA also sought to address inflation-induced financial problems facing the utility industry.

By the mid-1980s environmental concerns and lack of capital made siting new electric facilities nearly impossible. Instead of relying on utilities to site new power plants, PURPA contained a provision to encourage the development of smaller qualifying facilities owned by non-utilities to generate the electricity needed to keep up with demand. This provision also encouraged the development of more environmentally friendly small power production through alternative energy sources and natural gas cogeneration.

As PURPA went into effect, however, policy makers and consumers alike found out that the small hydroelectric facilities the law encouraged were not environmentally friendly. Other problems with electric utilities persisted, including increasing rates, debt-to-equity ratio troubles, and bond rating difficulties. Legislators responded but no bills passed. Meanwhile, others,

especially major companies, became interested in applying to FERC and receiving qualifying status for their electric generating facilities. Qualifying status in some cases served as another revenue stream, and companies also could take advantage of associated federal tax credits for owning such facilities. Ironically, because it was up to the state PUCs to determine how much qualifying facilities could be paid through avoided cost formulas, states with more generous formulas tended to have more electricity provided by qualifying facilities, and electricity from these sources was more expensive for consumers than electricity provided from utilities.

Members of Congress became more concerned with the environmental impact of electric utilities as the economy improved. At the same time, the average economic condition of electric utilities strengthened, and average national retail rates rose more slowly in some years and even declined between 1983 and 1986. With the threat of stagflation dissipating, legislative policy objectives began to fragment and became more ridden with regional, ideological, and partisan conflict. Much of the conflict centered on whether federal policy toward electric utilities should center on environmental or energy concerns.

Patterns

Meanwhile, several notable patterns emerged for private electric utilities between 1977 and 1986 related to their performance, congressional responses, and FERC's responses to congressional actions. To tap the performance of private electric utilities, I examined the average U.S. electricity retail rates in both nominal and real terms from 1977 to 1986 (see Table 4 in the Appendix), debt-to-equity ratios (Table 28), net operating incomes (Table 29), and bond ratings for electric utilities (Table 30). Recall the performance of utilities was tied to some degree to the overall national economy as rates increased, debt-to-equity ratios worsened, and bond ratings were not likely to improve during the stagflation era. Meanwhile, the legislative response to stagflation was measured by proposed legislation (Tables 16 and 17), statutes (Table 18), and budgets (Table 15). FERC's responses to congressional action was tapped by the number and type of orders (Table 20), opinions (Table 22), and docketed decisions (Tables 24-27).

Utility Performance

During 1978 and 1979, nominal rates increased annually by almost nine and eight percent, respectively (U.S. Energy Information Administration, 2012). In 1980 through 1982 nominal rates increased annually by between 11 and 18 percent. Finally, after stagflation ended,

between 1983 and 1986 nominal rates grew by between -0.8 percent and three percent annually. During the peak of stagflation real prices increased the most, while after stagflation ended they flattened.¹⁴¹ This flattening likely was the result of utilities requesting fewer wholesale and retail electricity rate increases.

As the economy improved and stagflation faded, on average companies saw a slow but steady annual improvement in their debt-to-equity ratios (U.S. Energy Information Administration, 1984, pp. 18-20; 1989, p. 15). Similar improvements can be seen in average net operating incomes in Table 29 (U.S. Energy Information Administration, 1984, pp. 8-9; 1989, p. 3), and in the percentages of utilities with an A- or better bond rating from Standard & Poor's in Table 30 (Congressional Research Service, 1991, p. 77; U.S. Energy Information Administration, 1991, p. 590; 1996b, p. 555). Stagflation clearly affected the financial well-being of private electric utilities, a point supported by the decline in the number of ES decisions FERC made on utilities issuance of securities or assumption of debt in 1982 (see Tables 24-27; Federal Energy Regulatory Commission, 2011).

Congressional Response

Congress responded in part by giving primary responsibility to FERC for addressing problems related to private electric utilities including financial questions. Members introduced a number of bills designed to give FERC the tools it needed to improve utility outcomes.

Legislators did not introduce much legislation effecting the Agency's jurisdiction in FERC's first year or so of operation, likely because they wanted to see how the Agency operated and what the impact of PURPA would be on electric utilities. Following real retail electricity rates peaking in 1982, proposed legislation spiked in 1983. As real rates began to decline in 1983 and nominal rates began to flatten, there was a corresponding decline in the number of FERC-related bills addressing financial aspects of the electric utility business between 1984 and 1986.

Congress also reacted through the appropriations process both to stagflation and to how well FERC was viewed as operating. Initially, FERC received notable annual increases, but by 1982 those increases slowed. The earlier narrative suggests that Congress was willing to give the

¹⁴¹ In areas of the economy where prices were not regulated, one would expect to see rates decline as stagflation went away; however, because electricity rates were regulated the best one could hope was for rates to flatten out as previous rate increases were locked in at both the resale and wholesale levels by state and federal regulation.

Agency financial resources to get it up to speed, but a number of events helped constrain future budget increases. President Carter sought to constrain federal spending and the number of federal personnel to address stagflation. President Reagan later approved sizable budget requests for the Agency, but FERC may have gotten caught up in partisan wrangling over whether the Department of Energy should be abolished. Then, the Gramm-Rudman-Hollings Act (P.L. 99-177; 99 Stat. 1037) produced budget reductions in 1986. Moreover, budget issues grew more difficult as some legislators began to question FERC's performance, especially in light of its 1986 scandal. Yet, the Commission received statutory authority to get around these constraints by collecting fees and other charges and became a self-funded agency.

FERC's Reactions

FERC reacted to congressional actions primarily through orders, opinions and docketed decisions. Orders peaked in 1982 (tied with 1980), the same year average national real retail electricity rates peaked. Opinions, lagging indicators peaked in 1983. On the other hand, the number of docketed decisions increased every year, largely due to PURPA.

Conclusion

Several conclusions can be drawn from the analysis of this first crisis. Clearly, the financial condition of electric utilities and retail and wholesale rates are associated, but whether higher rates or the financial problems came first for poorly performing utilities during the stagflationary era is unclear. What is clearer, however, is that once stagflation ended many utilities benefitted from the improved financial conditions, resulting in better average national debt-to-equity ratios, net operating income, and bond ratings. During the stagflationary period legislators evidently responded to increasing electricity rates and constituent complaints by introducing more bills; however, as real retail rates began to decline in 1983 the number of bills began to drop as well. This is consistent with views of Congress as a reactive institution, making the bill introduction decline a lagging indicator of what was occurring in the economy. FERC responded to congressional actions, including the passage of legislation and budgets and to the overall performance of electric utilities, by issuing more orders when rates were high and fewer orders as rates began to decline in 1983. Much like the number of bills introduced, FERC opinions were lagging indicators. Finally, except for 1984 and 1986, the Commission issued more docketed decisions for electric utilities every year due in large measure to the exponential

increase in the number of applications by small electricity generators for qualifying facility designation under PURPA.

The stagflationary era had a profound impact on electric utilities, American politics, and U.S. society as a whole. It led Congress to reorganize the Federal Power Commission into the Federal Energy Regulatory Commission and to establish the first step in providing for competition among utility and non-utility electricity generators with the passage of PURPA. Although many legislators were eager to move past the problems and the constraints of the era, they would continue to worry about the next economic crisis. Some legislators were convinced that another Middle Eastern OPEC oil embargo-like situation would trigger the next economic crisis. While legislators were on the lookout for the next crisis, FERC became embroiled in a series of scandals that would limit its capacity. With this as a subtext, the next “crisis” would occur all too soon with the Gulf War in 1990.

Chapter 6

Gulf War and the Energy “Crisis,” 1990-1991

Stagflation left lasting scars on the American political landscape and changed the policy orientations of most Americans. It was no wonder then that federal elected officials were on the lookout for any potential sign that something might cause a return to the bad old days of economic stagflation. With the start of the Gulf War in 1990, many members of Congress spotted a new economic threat.

On August 2, 1990 Saddam Hussein ordered Iraqi troops to invade Kuwait in the Persian Gulf (Dlugosz et al., 1999, p. 1267). For many in the U.S. the event brought back memories of the OPEC oil embargo and the subsequent high oil and energy prices that contributed to stagflation. Amplifying the fear was that the United States imported nearly half of all of the oil it consumed and at least some of those supplies came from countries in the Persian Gulf (Congressional Research Service, 1994, p. III; U.S. Congress. House. Committee on Banking, Finance, and Urban Affairs. Subcommittee on Economic Stabilization, 1990, p. 1).

Yet, what occurred in the 1970s with the OPEC oil embargo differed from the Gulf War. First, while the OPEC countries agreed to impose an embargo on the United States in 1973, in the Gulf War Kuwait and Saudi Arabia were part of the coalition the George H.W. Bush administration assembled to expel Iraq from Kuwait (Organization of the Petroleum Exporting Countries, 2013; Suedfeld, Wallace, & Thachuk, 1993, p. 190).¹⁴² The Saudis also agreed to pump more oil to make up for any supplies lost to the world market from Iraq and Kuwait. Next, nationally private electric utilities used petroleum-based products to generate only roughly four percent of all the electricity produced in 1990, limiting the impact of oil price increases on electricity rates (U.S. Energy Information Administration, 2012).¹⁴³ By August 7, 1990 committees and subcommittees in Congress were already beginning to hold hearings on Iraq’s

¹⁴² In 1990 the list of OPEC countries included Iran, Iraq, Kuwait, Saudi Arabia, Venezuela, Qatar, Indonesia, Libya, the United Arab Emirates, Algeria, Nigeria, Ecuador, and Gabon (Organization of the Petroleum Exporting Countries, 2013). The United States fought against Iraq but was allied with Kuwait and Saudi Arabia; Iran agreed with the goals of the coalition but did not participate, and Algeria remained neutral (Suedfeld et al., 1993, p. 190).

¹⁴³ Some states were far more reliant on petroleum for electricity generation than others. To see what states were affected the most by increases in oil prices, see the U.S. Energy Information Administration website, “Net generation by State by type of producer by energy source” (2013a).

invasion of Kuwait and what it might mean for oil and energy prices in the United States (U.S. Congress. House. Committee on Banking, Finance, and Urban Affairs. Subcommittee on Economic Stabilization, 1990, p. 1).

Reaction of Congress and FERC to the Perceived Crisis in 1990

Congress Reacts in 1990

It is useful at this point to highlight the broader policy environment prior to the start of the Gulf War. George H.W. Bush had succeeded Reagan as president in 1989, and both chambers of Congress remained under Democratic control. In 1989 Congress appropriated \$116.55 million for FERC's fiscal 1990 budget (see Table 15; P.L. 101-101; 103 Stat. 661; Office of Management and Budget, 1991, p. A-673), and the Agency's total available funding for FY 1990 was \$116.8 million and its total expenses \$114.3 million (Federal Energy Regulatory Commission, 1991a, p. 2). Congress also changed the terms for FERC commissioners (P.L. 101-271; 104 Stat. 135) and removed the PURPA size limitation for small power production facilities to be eligible for qualifying facility designation if they were fueled by renewable energy (P.L. 101-575; 104 Stat. 2834). Between 1989 and 1990 the average national nominal retail rate of electricity grew by almost two percent, while the average national real retail rate declined by nearly two percent (Table 4; U.S. Energy Information Administration, 2012). At the same time, the debt-to-equity ratio for major investor-owned electric utilities in the United States was 56.8 to 43.2 (Table 28), almost identical to the 1988 ratio and their net operating income was a little over \$30.5 billion (Table 29; U.S. Energy Information Administration, 1995, p. 35; 2003, p. 50).

Although 1990 began quietly enough, by early August things grew more difficult. Throughout 1990 legislators introduced a total of 15 bills that directly referenced the Federal Energy Regulatory Commission, but only five would have had an impact on private electric utilities if they were adopted (Tables 16 and 17). One, H.R. 5060 introduced by Representative John Rowland (R-CT), would have required the creation of an inspector general's office at FERC (Thomas, 2013j). Perhaps the legislation was designed to address some of the problems at the Agency including the 1986 scandal and cases of *ex parte* communications by creating a unit capable of investigating and punishing cases of misbehavior. Another piece of legislation, [H.R. 5735, introduced by Representative Norman Lent (D-NY)] would have required FERC to ensure that rate schedules conformed to least-cost planning requirements before the schedules could be approved (Congressional Research Service, 2013j). Next, both H.R. 5767 [introduced by

Representative Phillip Sharp (D-IN)] and S. 2415 [introduced by Senator Pete Domenici (R-NM)] would have required FERC to create new rules removing the restrictions on the size limitations of renewable energy small power production facilities that could be designated qualifying facilities under PURPA (Congressional Research Service, 2013k, 2013l).¹⁴⁴ None of these bills passed both houses of Congress.

Before the Gulf War started Congress began working on the Commission's fiscal 1991 appropriations. Ultimately, Congress appropriated \$122.75 million for FERC, a five percent increase over the previous year (Table 15; P.L. 101-514; 104 Stat. 2093; Bevill, 2013; Office of Management and Budget, 1993, p. 475), and the amount FERC requested (U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1990, p. 2).

In the meantime, FERC's counsel had to provide testimony to Congress on the Agency's budget request because the Chair was recovering from surgery, potentially limiting the information that may have been gleaned from the testimony (p. 1). However, the testimony revealed that some legislators remained concerned with issues related to public participation in Commission proceedings, especially insufficient public notice and due process problems (pp. 57-58). More directly relevant to electric utilities, Representative John Myers (R-IN) asked whether market competition for electricity would allow a utility to sell surplus power below regulated rates (p. 59) FERC Counsel William Scherman responded that the Commission would have to approve such sales, and the Agency would seek to maintain existing wholesale electricity contracts even if such a sale were allowed to occur (p. 59). Competition should cause downward market pressure on prices, and it was unclear how FERC would respond since it and utilities operated based on contracts locking in electricity prices for extended periods of time for decades; yet they now were expected to respond to market pressures as competition continued to develop. Scherman also indicated that Commission Chairman Martin Allday saw competition as a way to attract non-utility generators to the electricity marketplace to prevent electricity shortages and power outages (p. 60). By turning to competition to attract more non-utility generators Allday clearly was concerned about the amount of electricity utilities produced and likely pessimistic about the prospects of building new power plants. If new plants were built or competition

¹⁴⁴ This matter was addressed in H.R. 4808, introduced by Representative Philip Sharp (D-IN), (P.L. 101-575; 104 Stat. 2834).

expanded, it might limit the effect of higher oil prices if the plants used a fuel source other than petroleum.

In addition, some members of Congress were angry about FERC's performance related to *ex parte* communications, controversies surrounding a child care facility, and most importantly how the Agency implemented provisions of federal law related to electric utilities. In fact, the anger was reminiscent of that legislators expressed in the 1970s toward the Federal Power Commission just before it was reorganized into the Federal Energy Regulatory Commission. Representative Mike Synar (D-OK), the Chair of the House Subcommittee on the Environment, Energy, and Natural Resources, held hearings in October 1990 where he laid out a case critical of FERC's performance (U.S. Congress. House. Committee on Government Operations. Subcommittee on the Environment, Energy, and Natural Resources, 1990, p. 1). Synar suggested that the Agency needed to be subjected to more scrutiny because of criticism leveled against the Commission by nearly every entity subject to its regulation; the federal courts had also overturned numerous FERC decisions (p. 1). Furthermore, Synar cited a number of delays in FERC decision making that had increased costs, and he raised energy and environment-related concerns (p. 1). Representative William Clinger (R-PA), the ranking Republican on the Subcommittee, agreed with Synar's assessment that the Commission needed closer congressional scrutiny (p. 2). These controversies may have limited FERC's capacity to respond to future crises, including a fuel-based energy crisis that many legislators feared due to the Gulf War.

In relation to electricity regulation Synar brought up a number of specific points that he wanted Chairman Allday to address. First, in 1988 FERC had developed notices of proposed rulemaking (NOPRs) designed to restructure the electric utility industry; Synar wanted to know why FERC had not pursued the NOPRs (p. 92). Allday commented that the restructuring effort was halted because of transmission access limitations produced in part by the federal courts and by technical considerations (p. 92). Synar responded sharply, arguing that FERC had attempted to overstep its authority by mandating wheeling in certain cases when Congress had never given the Agency the authority to do so (pp. 92-93). Allday and the Acting Director of the FERC Office of Electric Regulation, Jerry Milbourn, both countered that FERC did not mandate wheeling (p. 93).

A similar back-and-forth occurred over the proper regulatory roles for state PUCs and FERC. The first instance involved wholesale electricity transactions within the borders of one

state. FERC Counsel Scherman noted that in such transactions the states regulate the retail portion of the transactions, while FERC regulates the wholesale portion of the transactions (p. 94). Second, Synar wanted to know whether FERC required utilities to consider potential environmental problems including acid rain and global warming when it made decisions; Richard O'Neill, the Director of the Office of Economic Policy at the Commission, responded that these environmental considerations were largely left to the EPA, state, and local environmental agencies to handle (p. 94).

FERC Copes with Challenges in 1990

Not only was FERC required to address energy concerns related to the Gulf War, it also had to navigate internal administrative problems and growing anger in Congress over its regulatory performance in 1990. Congress had addressed a number of recurring themes including rate matters, public participation, environmental concerns, the budget, regulatory jurisdiction, and competition. Even with the end of stagflation Congress remained concerned about electricity rates and problems surrounding public participation. As chapter 5 described, Congress grew more active and more concerned about environmental problems related to private electric utilities in an improved economy. FERC's budget generally continued to increase but concerns lingered over government spending placing the Agency in a precarious position; it continued to pursue self-funding to address long-term budget concerns. The Commission remained unwilling to engage in matters related to private electric utilities outside of its regulatory jurisdiction, making it unwilling to bridge the difficulties created by regulatory underlap and overlap. Finally, the Agency sought to cope with the possibility of competition in electric utility markets when it was unsure how to regulate such competition.

FERC issued seven orders (see Tables 19 and 20), and nine opinions (Tables 21 and 22) that dealt with matters relevant to electric utilities in 1990. Of the orders two of the orders were administrative, two were related to fees and charges, two involved revisions to forms, and one dealt with generic rates of return. Meanwhile, five opinions related to wholesale rate matters, three addressed transmission issues, and one involved building power plants.

It also issued 1,987 formal docketed decisions in 1990, 24% of which related to private electric utilities (Tables 24-27). Of these electricity cases 31% dealt with wholesale and transmission rates (ER), while 26% related to qualifying facility status. The EL prefix related to electric utility filings made up 14% of the cases for electricity, while 12% of the cases related to

securities or liabilities (ES). Comparing 1990 to 1986, the total number of electricity cases decreased by 48%, due mostly to a 74% drop in the number of QF decisions and a 39% decline in ER decisions. The drop in the number of QF decisions also resulted in the Commission deciding a larger proportion of the cases; office directors made QF decisions almost exclusively. The Commission made 56% of the decisions, office directors 41%, and administrative law judges 3%.

Although it is not completely clear why FERC issued fewer formal docketed decisions in 1990 than it had in the past, a number of factors may have had an impact. First, as chapter 5 described, Congress had been encouraging the Commission to handle more of its cases informally. Second, utilities simply were not having much financial difficulty as they had in the late 1970s and early 1980s. Some evidence suggests that utilities were, for example, performing better than they had been, as over 60% of utilities had bond ratings of A- or better in 1990 (McDermott, 2012, p. 20). Overall the electric utility industry was financially stable, perhaps requiring fewer actions by FERC. Third, it is likely that the Commission was not as active in its formal decision making because of the residual effects of the controversies it had faced. FERC may not have had the time to deal with all of the potential utility matters at the same time it tried to fix problems caused by *ex parte* communications, the child care facility issue, and the 1986 scandal. Ultimately, however, at least some of the decline in formal Commission decision making may have been the result of ongoing changes in the electric utility industry itself with the development of non-utility electricity generators.

Congress Pursues a National Energy Policy in 1991

In 1990 as FERC concentrated on rates, fees, the import and export of electricity, efforts to streamline appeals of staff actions, form reporting requirements, and the move toward more competition in the electric utility industry, Congress had other concerns. Legislators focused on the Gulf War, what it would mean for energy prices, and what higher energy prices might mean to the economy. At least some members of Congress remained critical of FERC's performance.

Although some legislators were convinced that the Gulf War would be a major crisis that would last a long time and cause severe economic problems for the country, much of the data produced by electric utilities at the time suggested these fears probably were overblown. First, between the end of 1990 and the end of 1991, the average nominal retail electricity rate increased about three percent and the average real retail rate decreased almost one percent (Table 4; U.S.

Energy Information Administration, 2012). Over the same period the average debt-to-equity ratio for utilities improved to 56.5 to 43.5 (Table 28; U.S. Energy Information Administration, 1995, p. 29), and net operating income for utilities increased to \$32.09 billion (Table 29; U.S. Energy Information Administration, 2003, p. 50). Finally, nearly 61% of utilities had bond ratings of A- or better, indicating most remained economically stable (Table 30; U.S. Energy Information Administration, 1996b, p. 555).

Nevertheless, many members of Congress began to pursue passage of a broad national energy policy. Most of the legislation introduced to deal with matters related to electricity, the Federal Energy Regulatory Commission, and a potential energy crisis was introduced after the Gulf War officially ended on February 27, 1991 (Suedfeld et al., 1993, p. 190). In 1991 legislators introduced 37 bills, of which 18 (Tables 16 and 17) addressed various aspects of a potential energy crisis, FERC's jurisdiction, or matters related more generally to electric utilities (Thomas, 2013k). Of the 18, 11 were comprehensive legislation addressing various elements of electric utility matters, FERC jurisdiction, and potential sources of an energy crisis.¹⁴⁵ Only H.R. 776, the Energy Policy Act of 1992 (Table 18), ultimately passed and became law in 1992.¹⁴⁶

A few other bills introduced in 1991 had more specific foci than the omnibus bills just described. First, H.R. 1196 [introduced by Representative Jan Meyers (R-KS)] and S. 326 [introduced by Senator Arlen Specter (R-PA)] would have established an energy conservation program to save energy and lower costs (Thomas, 2013k). Next, H.R. 2224, the Electric Power

¹⁴⁵ Representative Philip R. Sharp (D-IN) introduced H.R. 776, known as the Energy Policy Act, on February 2, 1991. Representative John Dingell (D-MI) introduced H.R. 1301, known as the National Energy Strategy Act, on March 6, 1991, and Senator Bennett Johnston (D-LA) introduced its Senate companion S. 570 on March 6, 1991. Representative Norman Lent (D-NY) introduced H.R. 1543, known as the Comprehensive Energy Policy Act of 1991, on March 21, 1991. Representative Billy Tauzin (D-LA) introduced H.R. 2825, known as the Electricity Policy Act of 1991, on June 27, 1991. Representative John Murtha (D-PA) introduced H.R. 3265, known as the National Energy Resources Act of 1991, on August 2, 1991. Senator Bennett Johnston introduced both S. 341 and S. 1220, each of which were known as the National Energy Security Act of 1991. Senator Conrad Burns (R-MT) introduced S. 661, known as the American Energy Independence Act of 1991, on March 14, 1991. Senator Timothy Worth (D-CO) introduced S. 741 and S. 742, and both were known as the National Energy Efficiency and Development Act of 1991 (Thomas, 2013k).

¹⁴⁶ I discuss the Energy Policy Act of 1992 in more depth below.

Fairness Act of 1991, was introduced by Representative Edward Markey (D-MA) to provide FERC with mandatory wheeling authority by amending the Federal Power Act (Congressional Research Service, 2013m). Additionally, H.R. 2871, the Clean Coal Technology Efficiency Improvement Act of 1991, was introduced by Representative Terry Bruce (D-IL) and directed FERC to establish rules and regulations to encourage the development of clean coal technologies (Congressional Research Service, 2013n).

Despite some legislators' misgivings about FERC's overall performance, its appropriations were not affected. Congress approved \$141.071 million for fiscal year 1992 (Table 15; P.L. 102-104; 105 Stat. 531; Office of Management and Budget, 1994, p. 584; Federal Energy Regulatory Commission, 1992a, p. vii), a 15% increase over the previous year.

Congressional concerns over the potential for another energy crisis might have prompted both the increased budget and a number of hearings in 1991. In a Senate hearing on the National Energy Security Act S. 341, Associate FERC Counsel Cynthia Marlette was asked to speak about the hydroelectric provisions in the bill (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1991). Marlette proposed revisions including granting FERC more authority over the hydroelectric licensing process to prevent gridlock from occurring when siting such facilities (p. 21). Hydroelectric facilities offer the opportunity to generate electricity without relying on foreign sources of energy like petroleum. As a result hydro power was considered a vital piece of the energy production portfolio in the United States. While some legislators bemoaned FERC's performance, others looked to FERC for assistance in implementing regulatory policies designed to insulate the country from potential energy problems caused by a lack of access to oil.

Congress also turned to FERC in a House hearing on general electricity regulation and on transmission access, topics several bills addressed.¹⁴⁷ Associate Counsel Marlette testified that utilities had changed a good deal since the passage of PURPA, with the statute's creation of competition among utility and non-utility generators of electric power (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1992, p. 14). She then suggested that PUHCA created barriers to such competition, which forced non-utility

¹⁴⁷ H.R. 1301 was the National Energy Strategy Act, H.R. 1543 the Comprehensive Energy Policy Act, and H.R. 2224 the Electric Power Fairness Act. The first two bills dealt with electric power regulation comprehensively, while the last one would have allowed FERC to mandate wheeling.

generators to change their ownership structures to prevent being classified as a utility (p. 15). Additionally, she expressed concern that PURPA restricted who could enter into the wholesale market, limiting the potential for competition among generators (p. 14).

Under questioning from Representative Philip Sharp, Marlette suggested that PUHCA posed increased costs by forcing non-utilities to change their ownership structures and caused some potential generators to opt not to enter the marketplace at all; ultimately such costs would end up being passed on to the consumer (p. 101). She then responded to an inquiry by Representative Carlos Moorhead (R-CA) about why FERC gave a higher priority to non-utility transmission transactions than to utility transactions. Marlette said that without such a priority utilities might try to block access to non-utility transmission, and the Commission sought to encourage utilities to build more transmission facilities (p. 104). Representative Markey was concerned with ensuring transmission access, and she indicated to him that FERC staff were examining ways to increase transmission access or to mandate it in cases where it would be legal under pre-existing law (p. 106). Overall, in terms of both competition and transmission access Marlette suggested that the Commission needed to proceed cautiously because of technical problems like stranded costs, pricing, and reliability (p. 106). Representative Synar then asked whether FERC had performed a study of transmission reliability to which Marlette answered that no such study had been done (p. 111).

Marlette's testimony is important for at least two reasons. First, it showed that no matter how angry at least some legislators were, when questions related to electricity arose, especially in response to a perceived crisis, one of the main sources of assistance Congress turned to was the Commission. Moreover, the testimony showed again that some members of Congress seemed more enthusiastic than FERC about the possibilities of competition for electric power generation and transmission access.

FERC Reacts to Congressional Actions in 1991

Perhaps FERC was fortunate that many of its problems coincided with other more important difficulties that garnered more legislative attention. In 1991 this meant that concerns grew over the possibilities of another energy crisis. FERC appeared to be less worried about the possibilities than Congress of a crisis and more cautious in its approach to competition and transmission access for electric utilities.

This abundance of caution may well explain why the Commission issued only two formal orders relevant to private electric utilities (Tables 19 and 20) and four opinions (Tables 21 and 22) in 1991. The orders involved form revisions, and the opinions focused on wholesale rates. Furthermore, the number of docketed decisions (Tables 24-27) for electric utilities is consistent with a view of FERC's caution, declining in 1991. Although the total number of docketed decisions increased to 2,050, the number of docketed decisions for electric utilities fell to 414, a 13.5% decline from the previous year. Of these decisions, 26% were rate cases (designated by the prefix ER), 17% related to securities and debt (ES), and 17% decided qualifying status (QF). The number of mixed decisions with multiple prefixes and miscellaneous electricity filings with the prefix EL each comprised 13% of the total. Administrative law judges made 5% of the decisions, the Commission 53%, and office directors 42%.

The decline in the number of orders, opinions, and docketed decisions is consistent with the financial data for electric utilities. No crisis, financial or otherwise, evidently existed for private electric utilities. Instead, their financial condition generally had been slowly improving since the mid-1980s. During the crisis of the mid-1970s, on the other hand, one saw a rapid and steep decline in the financial condition of electric utilities matched by strong pressure among utilities for higher electricity rates. Such pressure did not appear in 1991. Indeed the 108 decisions in rate cases marked the lowest number of cases since FERC was established.

Changes Occur in 1992

Energy Policy Act of 1992

When Congress passed the Energy Policy Act of 1992 (Table 18; P.L. 102-486; 106 Stat. 2776), it likely was a rare attempt to be more proactive to forestall the problems the country faced in the aftermath of the OPEC oil embargo from recurring in reaction to the Gulf War.¹⁴⁸ The Act made a number of important changes to FERC's authority. First, section 711 gave the Agency authority to grant exempt generator status to facilities that only sold electricity wholesale

¹⁴⁸ Senator J. Bennett Johnston largely supported this conclusion in the foreword that he wrote to a Congressional Research Service study on the "History of the Energy Policy Act of 1992" (Johnston, 1994, pp. iii-iv).

(P.L. 102-486; 106 Stat. 2905-2910). This provision was designed to address the problem Associate Counsel Marlette had highlighted in an earlier hearing.¹⁴⁹

Second, section 713 of the statute allowed holding companies to own stakes in cogeneration facilities (P.L. 102-486; 106 Stat. 2911), something that had not been clear under existing law (P.L. 99-186; 99 Stat. 1180; P.L. 99-553; 100 Stat. 3087). Third, sections 721 and 722 granted FERC the authority to issue mandatory orders for transmission access, interconnection, and wheeling services subject to terms, rates, and charges that the Commission approved (P.L. 102-486; 106 Stat. 2915-2919).

Other Congressional Actions in 1992

When Congress passed the Energy Policy Act of 1992 it did so in the face of data that suggested that the electric utility industry was financially stable. For example, the average national nominal retail rate for electricity increased by one percent between the end of 1991 and the end of 1992, while the average national real retail rate decreased by one percent (Table 4; U.S. Energy Information Administration, 2012). The average debt-to-equity ratios for private electric utilities improved to 56.1 to 43.9 (Table 28; U.S. Energy Information Administration, 1995, p. 29), even as their net operating incomes declined to \$31.8 billion (Table 29; U.S. Energy Information Administration, 2003, p. 50). However, the utilities also saw an overall improvement in bond ratings; the percentage of utilities that had A- bond ratings or better improved to 62% (Table 30; U.S. Energy Information Administration, 1996b, p. 555).

Though 1992 was a presidential election year, it that did not seem to affect the number of bills introduced that referred to FERC. Legislators introduced 24 bills related to FERC, but only four were directly linked to matters of interest to private electric utilities (Tables 16 and 17; Thomas, 2013l). The first of the four was a proposed amendment to the Energy Policy Act. House amendment 555 [introduced by Representative Ralph Hall (R-TX)] would have exempted the state of Texas from sections 721 and 722 in mandatory transmission and wheeling authority for FERC, but ultimately the amendment was withdrawn (Thomas, 2013l). In the meantime,

¹⁴⁹ Under the terms of the statute facilities could avoid being classified as utilities if they applied to FERC for an exemption from PUCHA, and FERC was required to provide the exemption as long as the facility met the terms and conditions of being an exempt generator. Congress left the specifics to FERC to establish through the issuance of rules and regulations. It is worth recalling that the Energy Policy Act of 1992 (102-486, 106 Stat. 2776) was passed by a Democratic Congress and signed into law by Republican President George H.W. Bush.

Senator Bennett Johnston introduced S. 2166, the “National Energy Security Act of 1992,” a comprehensive energy bill that was laid aside because of the passage of the Energy Policy Act (Thomas, 2013l). Senator Harry Reid (D-NV) then introduced S. 2392 to provide a right-of-way for a transmission line in Nevada; however, the bill died in subcommittee (Thomas, 2013l). The last bill, S. 2607 sponsored by Senator Johnston, would have given FERC the authority to approve regional resource plans for the efficient use of electricity, but it died in committee (Congressional Research Service, 2013o).

Congress delegated a significant new workload to FERC with the passage of the Energy Policy Act. Did Congress keep this new workload in mind when it passed fiscal 1993 appropriations? The question is useful to consider especially since the FY 1993 FERC appropriations passed nearly a month before the Energy Policy Act. Congress appropriated \$158.639 million (Table 15; P.L. 102-377; 106 Stat. 1338; Office of Management and Budget, 1995, p. 410; Federal Energy Regulatory Commission, 1993a, p. vi), a 12% increase over the previous year. Yet, the percentage increase was smaller than the previous fiscal year despite FERC’s new responsibilities. Perhaps Congress did not appropriate money for FERC to implement the Energy Policy Act because it had not passed yet, or it did not consider the Agency’s workload when appropriating funds. If the Agency did not have enough money to implement the law, Congress could have passed a supplemental budget appropriation; yet none was introduced.

As Congress considered FERC’s FY 1993 appropriations in 1992, it also held several hearings examining the Agency’s performance and larger questions related to the private electric utility industry. Representative Synar held more hearings on FERC’s administrative problems including *ex parte* communications, the day care center problem, and general administrative matters (U.S. Congress. House. Committee on Government Operations. Subcommittee on Environment, Energy, and Natural Resources, 1992). Even with all of these alleged problems Congress would turn to FERC nearly ten months later to implement important provisions of the Energy Policy Act. Some legislators evidently were less angry about or disturbed by the problems at FERC than others. Synar, for example, appeared to have developed animus toward the Agency, while Representative William Clinger suggested that some of FERC’s problems could have been caused by Congress itself (p. 308). Important in Clinger’s observation is that Congress had given the Commission a series of regulatory mandates it had to follow in the

course of its daily business. Unfortunately for FERC, these regulatory mandates sometimes conflicted with each other and created the possibility that some would necessarily be violated in fulfilling others.

In a hearing on S. 2607 before the Senate Committee on Energy and Natural Resources, senators questioned FERC officials about whether the Agency supported the bill and what changes ought to be made before it was adopted. The proposed legislation would have given FERC the authority to approve regional resource plans; much as it did with similar bills the Commission opposed the legislation. According to FERC Counsel William Scherman, the Agency opposed the bill because it would allow states that belonged to regional multi-state efforts to manage and plan the use and creation of electricity, preempting FERC's jurisdiction (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1992, pp. 19-20). The Commission believed that such preemption could cause conflict among the states that exercised joint preemptive authority, resulting in dueling regulatory approaches (p. 20). In turn, FERC feared such conflicting approaches could cause regulatory gridlock over matters related to the electric grid, producing reliability problems as best exemplified by higher rates and potentially power outages (p. 20). Scherman also expressed concern that the legislation would threaten efficiency and the development of competitive wholesale generation, which had been encouraged under a developing consensus over a national energy strategy (p. 20).

The hearing on S.2607 raised a number of key points in the question and answer period. First, Scherman observed that the legislation would put FERC in the position of deciding whether to allow one state party to a regional agreement to veto a measure approved by the other states in the region, or to step in and force the one opposing state to accept what other states had agreed upon (p. 83). As the Counsel pointed out, whatever the Commission decided would cause conflict with at least one of the states. Moreover, he said that FERC was willing to defer to state agreements as long as the agreements avoided discriminatory practices and balanced the interests of state commissions, utilities, and non-utilities in the emerging generation and transmission markets (p. 73). This last point highlighted the growing complexity of the generation and transmission marketplaces that would make it more difficult to reach agreements over how such markets should operate.

FERC Responds to Congressional Actions

As FERC prepared to act in 1992, it did so as Congress grew more interested in adopting a national energy policy. This became clearer throughout the year as legislators introduced and debated a number of bills that would have established such a policy. While the debates were occurring, questions arose once again in Congress over the performance of the Commission. Fortunately for FERC, however, some members recognized that Congress itself contribute to some of the Agency's problems. In addition, legislators continued to explore the possibility of regional energy planning to maximize efficiency and conservation, while FERC kept opposing such efforts because of interstate commerce concerns. By the end of the year, Congress had adopted the Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2776), which expanded the Commission's authority in important ways.¹⁵⁰ Finally, it became clearer that as markets began to develop for generation and transmission, governing them would be ever more difficult for FERC and Congress alike.

Responding both to congressional actions and to changes in the electric utility industry the Commission issued three orders (Tables 19 and 20) and ten opinions (Tables 21 and 22). Two orders dealt with administrative matters, and one involved the generic rate of return for utilities. Six opinions responded to wholesale rate cases, three involved transmission issues, and one addressed the ability of an entity to intervene in a sale and merger decision.

Between growing congressional consensus for a national energy policy and the passage of the Energy Policy Act, FERC was expected to pursue the development of a new electric utility arrangement through orders, opinions, and docketed decisions (Tables 24-27). The new approach was supposed to include qualifying generation facilities under PURPA, wholesale generators FERC exempted from PUHCA, mandatory Commission orders for transmission interconnection, and orders requiring wholesale electricity wheeling. These changes were designed to break up the old monopoly arrangements that state regulations had encouraged electric utilities to develop, resulting in different companies owning generation facilities and power lines requiring new and different forms of federal regulation. This modification would not happen all at once, however, and FERC started implementing rules to encourage these changes slowly and carefully. This is why none of the orders described above dealt specifically

¹⁵⁰ Beyond what has already been discussed, the statute required FERC to regulate the sales of exempt wholesale generators (P.L. 102-486; 106 Stat. 2920; § 724) and financial arrangements between U.S. and foreign utilities (P.L. 102-486; 106 Stat. 2912-2915; § 715).

with encouraging the new electric utility configuration. A few of the opinions, however, touched on topics that would become more common as FERC encouraged the development of the new system for transmission rates and transmission interconnection agreements.

As one would expect, the docketed decisions began to pick up some of the issues associated with elements of the newer system by the end of 1992. In 1992, FERC issued 1,893 docketed decisions, of which 25% had electric utility-related prefix designations (Tables 24-27). Looking specifically at the decisions for utilities, 30% addressed matters including wholesale wheeling, wholesale rates, transmission rates, transmission interconnection agreements, and transmission schedules (ER). Although many of these issues existed in the past, with the congressional push for a new arrangement for electric utilities and passage of the Energy Policy Act one would expect ER cases to have increased significantly because of different companies owning transmission lines and generation facilities.¹⁵¹ Additionally, 16% of the utility cases dealt with the qualifying status of cogeneration and small power production facilities under PURPA (QF), a notable decline from the mid-1980s. It may reflect that most of the facilities that wanted to achieve qualifying status had already done so or that achieving qualifying facility status in the 1990s was not as attractive as it had been. Other decision types worthy of mention include interlocking directorate (ID) cases that made up 13% of the total, security and debt cases (ES) 12%, and miscellaneous electric utility filing cases (EL) 10%. Lastly, FERC also issued four docketed decisions granting wholesale electricity generators exemptions from PUHCA. Clearly, these exemptions responded to provisions in the Energy Policy Act.

The year-to-year percentage change for each docketed case type and the division of work also is useful to consider. There was a 33% annual increase in ER decisions, expected as FERC continued to encourage development of new or relatively new elements of the electric utility system. QF decisions rose 11%, while ID decisions increased by 237%. Generally, the number of ID cases seems to fluctuate with little to explain such changes other than the number of interlocking directorate cases in a particular year. In contrast, ES decisions declined 21%, perhaps indicating that the financial condition of utilities was stable or improving somewhat. Of the decisions issued, administrative law judges were responsible for five percent (a year-to-year

¹⁵¹ Indeed, according to FERC, growth in the total number of electric rate filings per year due to electric market restructuring began to occur in 1992 (Federal Energy Regulatory Commission, 1997, p. 5).

increase of 15%), the Commission 48% (an annual increase of almost four percent), and office directors 47% (an annual increase of almost 29%).

Political Change and Policy Implications

Congress Reacts in 1993

Throughout 1992 several important changes occurred that would have long-term implications for the private electric utility industry. FERC tried to initiate some of these changes through the adoption of rules and regulations; however, the Agency determined statutory changes would be required. Congress responded by passing the Energy Policy Act of 1992.

At the same time political change occurred as Democrat William J. Clinton was elected president and Congress remained under Democratic control. Congress prepared to act in 1993 at a time of unprecedented change for electric utilities. Financially, however, utilities overall appeared to be stable, with debt-to-equity ratios of 55.5 to 44.5 (Table 28) and net operating incomes of \$31.7 billion (Table 29); 63% of electric utilities had bond ratings of A- or better (Table 30; U.S. Energy Information Administration, 1995, p. 29; 1996b, p. 555; 2003, p. 50). Moreover, the average national nominal retail rate of electricity had increased by only about one-and-a-half percent between the end of 1992 and the end of 1993, and the average national real retail rate decreased by half of a percent (Table 4; U.S. Energy Information Administration, 2012).

One would expect, as had happened in the past, that legislators would wait to see how FERC was implementing the new energy law before introducing bills designed to amend or otherwise change the Energy Policy Act. In fact, only two bills were introduced in 1993 related to FERC's regulatory authority over private electric utilities (Tables 16 and 17; Thomas, 2013m). S. 544, the "Multistate Utility Consumer Protection Act of 1994," introduced by Senator Dale Bumpers (D-AR), "would have granted the Commission the authority to reject certain costs incurred by holding companies and their affiliates from consideration in establishing just and reasonable rates" (Congressional Research Service, 2013q, p. n.p.). This authority already existed with state public utility commissions and the Securities and Exchange Commission under PUHCA; the legislation would have added FERC to the list of agencies that could regulate such matters. Second, S. 635, introduced by Senator Donald Riegle (D-MI), known as the "Multistate Utility Company Consumer Protection Act of 1993," would have transferred the authority just described from the SEC to FERC (Congressional Research Service,

2013r). Transferring such authority would have prevented the federal regulatory overlap that S. 544 would have created, but neither bill passed.

In late October Congress passed and the President signed the fiscal 1994 appropriation for the Commission, \$165.375 million, a four percent increase over the previous year (Table 15; P.L. 103-126; 107 Stat. 1330; Office of Management and Budget, 1996, p. 444; Federal Energy Regulatory Commission, 2013a, p. vi). This small increase is a surprise particularly since the Energy Policy Act had added new responsibilities to the Commission's regulatory jurisdiction.

Perhaps congressional hearings held in 1993 help explain the small increase. Relatively soon in the new legislative session, the House Subcommittee on Energy and Power held a hearing on FERC's implementation of the Energy Policy Act of 1992 (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1993). Subcommittee Chair Representative Philip Sharp (D-IN), the Act's sponsor, began by stating that the statute's purpose was to increase wholesale competition, improve the efficiency of utilities, and encourage the development of new technologies in the generation and transmission of electricity (p. 1). Furthermore, he suggested that if implemented correctly the law could maintain grid reliability and the financial condition of utilities, as well as give utilities more options in how they chose to deliver services to their customers (p. 1). While Representative Sharp also expressed confidence that FERC could handle the PUHCA and transmission provisions included in the law (p. 2), Representative Mike Synar (D-OK) countered with skepticism (p. 6).

At the same hearing, the new Chair of FERC, Elizabeth Moler, testified about the Commission's actions to implement the statute. FERC's Order Number 550 established the necessary processes and procedures for entities seeking exempt wholesale generator status (p. 7). Moreover, Commission staff were working on a proposed rule designed to require transmitting utilities to provide transmission access information to potential customers and the general public (p. 7). Additionally, Moler indicated that the Commission was considering the creation of a generic rule for entities seeking mandatory transmission service, and it was exploring the potential of establishing Regional Transmission Groups (RTGs) to assist with long-standing grid-related problems such as reliability, regional planning, and resolution of most transmission

access issues without needing Agency involvement (pp. 8, 70).¹⁵² The Chair also testified that the Commission was examining other potential pricing approaches designed to reflect changes in the structure of the utility industry (p. 8); however, Commissioner Charles Trabandt expressed concern that proposed formulas for calculating pricing for transmission services could force native load consumers to subsidize part of the wholesale wheeling costs (p. 43).¹⁵³

The question and answer period of the hearing focused on a number of important topics. First, Chairwoman Moler reported that of the initial 32 applications the Commission received for exempt wholesale generator status, 13 came from qualifying facilities under PURPA and 19 from facilities that were not qualifying facilities (pp. 47-48).¹⁵⁴ Meanwhile, Representative Michael Bilirakis (R-FL) expressed concern about the number of FERC Commissioners retiring and what that would mean for the Agency's ability to function; Moler answered that the Clinton administration was working as quickly as possible to fill the openings with qualified candidates (p. 48).¹⁵⁵ Next, Representative Dennis Hastert (R-IL) asked whether demand for transmission services might require building a new transmission grid and about associated costs; Moler responded that it might require building new additions or a new line somewhere, and the costs would be borne by those who made them necessary (pp. 50-51). Finally, in response to a question from Representative Synar about whether the Agency had a sufficient budget and staff to adequately implement the provisions of the Act, Moler indicated that the Commission was in

¹⁵² Ultimately, these RTGs become Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs), non-profits designed to manage on a day-to-day basis the national electric transmission system, freeing FERC to perform other duties and to act as a regulatory backstop when it was absolutely necessary.

¹⁵³ Commissioner Trabandt argued that wheeling customers should pay the entire cost of benefitting from wheeling services, and not require native load customers (customers that normally received electricity over the transmission lines being used for the wheeling service) to pay some of the costs.

¹⁵⁴ Moler's testimony revealed that both qualifying and non-qualifying generating facilities could apply for and receive exempt wholesale generating status. Twenty-five of the facilities receiving the exemption were affiliated with utilities, while seven were new entities not affiliated with existing utilities in the United States (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1993, p. 47).

¹⁵⁵ Four of the five commissioners had announced plans to retire early in 1993 (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1993, p. 3).

discussions with the Office of Management and Budget and the Department of Energy but the effort had been stymied somewhat by the President's promise to cut the federal workforce and to limit the size of the federal budget (p. 52).

The question and answer period also brought out a hotly contested issue of market restructuring. Representative Hastert asked what happened to the authority of state public utility commissions under of the Energy Policy Act if the industry were bifurcated with the establishment of transmission companies and separate generation companies (p. 75). Moler replied that bifurcation already was occurring; many utilities had created independent but affiliated generating companies, but she suggested that the monopoly-style utility structure regulated by the states likely would exist for some time (p. 75). Commissioner Branco Terzic added that it was up to the state public utility commissions to decide whether a utility should build a power plant to provide its own electricity or get its electricity from another source, and FERC would become involved only if the second choice was selected (p. 76).¹⁵⁶ To conclude, Representative Edward Markey (D-MA) told Chairwoman Moler that she needed to improve federal and state regulatory relationships to ensure interstate electricity competition occurred (p. 77).

In addition, the Senate Committee on Energy and Natural Resources held a hearing on the merits of S. 544. According to Senator Bennett Johnston, the bill sought to address problems identified by the U.S. Court of Appeals for Washington, D.C. decision *Ohio Power Company v. FERC* ([954 F.2d 779 (D.C. Cir. 1992)]; U.S. Congress. Senate. Committee on Energy and Natural Resources, 1993, p. 1). Chairwoman Moler expressed her support for the legislation with suggested amendments because it would allow FERC to better regulate the behavior of holding companies and prevent significant price increases for electricity (p. 9). She did indicate,

¹⁵⁶ State public utility commissions retained siting authority over generation, transmission, and distribution facilities. State PUCs also maintained retail rate authority over utilities, were solely responsible for regulating the distribution of electricity, and could choose in consultation with state elected officials whether a state would restructure its electric utility market. If the state chose restructuring, FERC then would regulate the transmission and purchase of power by a utility from another source.

however, that if the legislation were enacted FERC would need significantly more staff to enforce it (p. 9).¹⁵⁷

FERC and Change in 1993

FERC had to adapt to many changes in 1993, including the election of the first Democratic president since Jimmy Carter and the subsequent change in who chaired the Commission. President Clinton chose Elizabeth Moler to be the Chair, and the Senate confirmed her in early February (Federal Energy Regulatory Commission, 2013b). The Commission also had to cope with the President's promise to hold the line on government spending and the size of the federal government, while at the same time implementing the Energy Policy Act of 1992 and fulfilling its pre-existing regulatory responsibilities. Many of its new regulatory responsibilities required both more money and more staff. Congress nearly added to the burden as well when it contemplated the passage of legislation designed to grant the Commission the authority to reject costs holding companies incurred when establishing just and reasonable rates. Furthermore, market restructuring for electric utilities began to take shape in 1993 as FERC began implementing the Energy Policy Act, resulting in both opportunities and challenges.¹⁵⁸

The Commission responded by issuing six orders (Tables 19 and 20) and five opinions (Tables 21 and 22). Of the orders, two were administrative, two involved the implementation of the Energy Policy Act of 1992,¹⁵⁹ one delegated authority, and one revised a form. Meanwhile, two of the opinions dealt with complaints against automatic fuel adjustment clauses, one addressed a complaint about overbilling and whether it applied to a new system agreement, one approved a merger and a system agreement, and one reviewed transmission tariff and service agreements. As one would expect, the orders and opinions dealt both with new issues produced by the Energy Policy Act and *Ohio Power* and with existing ones like delegation and transmission rates. A similar pattern emerged in the 1993 docketed decisions; of the 1,913 docketed decisions 25% had electric utility-related prefixes (Tables 24-27). Of the electricity

¹⁵⁷ See chapter 3. The case also involved a U.S. Supreme Court decision *Arcadia, Ohio, et al., Petitioners v. Ohio Power Company et al.* [498 U.S. 73 (1990)].

¹⁵⁸ One of the challenges, of course, was the additional stress that market restructuring placed on the regulatory relationship between FERC and the state public utility commissions.

¹⁵⁹ One of the two orders mentioned here is related to the mandatory transmission of electricity and appears in Table 20 as a transmission related order.

cases, 35% were ER rate cases, 14% qualifying facility status cases (QF), almost 14% exempt wholesale generator cases (EG), and almost 11% miscellaneous electric filing cases (EL). Additionally, three cases had the prefix TX, transmission cases involving requests for mandatory transmission service as the Energy Policy Act of 1992 provided (Federal Energy Regulatory Commission, 2011).

The Energy Policy Act added variation to the case types, and it also seemed to encourage more decision making at the level of the Commission itself. In 1993 the Commission handled 65% of the cases, office directors 29%, and administrative law judges six percent. Although in the late 1970s and early 1980s Congress encouraged FERC to have office directors make more of its decisions, it would appear that the EPAct pushed more docketed decisions back to the Commission. Commission-level decision making for docketed cases increased by 38% from the end of 1992 to the end of 1993, while decisions by of office directors declined by 37%.

Establishing a New Federal Regulatory Equilibrium 1994

Congress Reacts to Implementation in 1994

By the end of 1994 the average nominal national retail rate of electricity had decreased by .02% from the previous year, and the average real national retail rate of electricity had decreased by about 2% (Table 4; U.S. Energy Information Administration, 2012). Utilities saw their net operating incomes increase to \$32.07 billion (Table 29); their average debt-to-equity ratios were 54.9 to 45.1 (Table 28), a slight improvement from the previous year; and 60% of all rated utilities had an A- bond rating or better, a slight decline from 1993 (Table 30; U.S. Energy Information Administration, 1995, p. 29; 1996b, p. 555; 2003, p. 50). Overall, electric utilities continued to be financially stable, and FERC appeared to be performing its regulatory functions appropriately.

In this context and with elections approaching, legislators introduced 22 pieces of legislation that specifically referenced the Federal Energy Regulatory Commission in 1994 (Tables 16 and 17; Thomas, 2013n). Of these bills, one was designed address an aspect of private electric utility regulation. Representative Rick Boucher (D-VA) introduced H.R. 4645 to remedy the problems *Ohio Power* identified by granting FERC the authority to reject costs a utility incurred under the Public Utility Holding Company Act in subsequent wholesale or transmission rate schedules (Congressional Research Service, 2013p). Such a fix, however, would have to wait for more than a decade before being resolved in response to another crisis.

Meanwhile, for FY 1995 Congress appropriated \$166.173 million for FERC, less than half of a percent increase over the previous year (P.L. 103-316; 108 Stat. 1719; Office of Management and Budget, 1996, p. 444; Federal Energy Regulatory Commission, 1995, p. vi). The small increase likely is consistent with President Clinton's promise to restrain government spending. Once again, Congress seemed pleased with FERC's performance.

One hearing, before the House Subcommittee on Energy and Power, examined the problems associated with *Ohio Power* and alternative solutions like the bill described above. The case involved two subsidiaries of the same company; one of the subsidiaries bought coal from the other at an extremely high price, and the costs associated with the purchase ended up being passed on to electricity consumers (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1994b, p. 1). The decision meant that FERC could no longer exercise its ratemaking authority over transactions by registered holding companies (p. 1). Representative Carlos Moorhead (R-CA) added that this meant that consumers that received electricity from a subsidiary of a holding company effectively were engaged in commerce with an unregulated company since neither FERC nor state PUCs could regulate its rates (p. 3).

FERC Chair Moler testified that *Ohio Power* effectively prevented FERC from regulating holding companies to prevent self-dealing, a serious matter as nearly a quarter of all electricity sold in the United States to consumers came from subsidiaries of holding companies (p. 7). Additionally, the SEC regulates to protect investors, while FERC regulates rates to protect consumers, and the SEC was never designed to address ratepayer issues (p. 7). Yet, the decision placed the SEC in the uncomfortable position of needing to protect ratepayers. Moler indicated that once the SEC approved a transaction by a subsidiary of a holding company, the decision required FERC to allow the costs to be passed on to consumers (p. 7). She testified that both FERC and the SEC supported legislation to allow FERC to regulate the rates of holding companies and their affiliates even if the SEC had approved the transaction, and the two agencies were working closely together to try to address any related problems (p. 9).

Later in 1994 Representative Philip Sharp (D-IN) held an even more important hearing, which touched on many of the issues raised by market restructuring. Sharp began by stating that the Energy Policy Act had encouraged an increasing number of wholesale electricity transactions, which were constrained primarily by transmission access for wholesale generators

(U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1994a, p. 1). Although FERC deserved credit for implementing the provisions of the Act, he maintained that the regulatory jurisdiction between state public utility commissions and the Commission needed to be redefined (p. 1); the old boundaries established by the 1935 Federal Power Act did not contemplate competition among electric generators.

Several FERC commissioners testified at the hearing. FERC Chair Moler suggested that regulating the industry was becoming more complex and challenging due to growing market competition (p. 172). Moreover, she stated that the Commission was committed to further encouraging the development of competitive wholesale markets for electricity and sought to provide open transmission access to wholesale generators to ensure such markets would continue to grow (p. 172). As Moler saw it, one potential threat to competition was the complicated regulatory structure designed to regulate the behavior of private electric utilities, and regulation of the industry needed to ensure both the financial stability and the reliability of the utility system (p. 172). She also indicated that as transmission access applications to FERC increased, the Agency needed to rethink how it set the price for transmission services to encourage greater efficiency and competition in the wholesale generation marketplace (p. 173).

Commissioner Vicky Bailey then testified about the “tensions” between FERC and the state public utility commissions that the changing arrangement of the electric utility industry had created. The Federal Power Act of 1935 struck a delicate balance between matters that fell under state regulatory jurisdiction and those regulated by federal agencies. Market restructuring upset this balance. On one hand the Energy Policy Act increased FERC’s authority to order transmission service and the expansion of facilities, but on the other the statute preserved the power of the states to site new facilities (p. 178). Additional “tension” emerged as it became less clear under market restructuring when electricity transmission occurred and when distribution took place; this distinction needed to be clarified because the states regulated distribution and FERC regulated transmission. Bailey observed that without such clarification “regulatory gridlock” and “chaos” could appear in the marketplace (p. 179). In her view, the best way to address regulatory overlap and underlap was to develop greater comity between the states and FERC through open and effective communication (p. 179). When a regulatory body identified an issue related to the jurisdiction of another regulatory entity, it should defer to the judgment of that entity. She stated further that regulatory underlap and “overlap” could be problematic in

areas of transmission decisions, “stranded costs,” and “retail access”; if comity did not work, a statutory fix would be required (p. 179).

According to Commissioner William Massey, the Commission encouraged the development of regional transmission groups (RTGs). Such groups were to be designed to give the grid operators and users in a region the ability to develop their own rules to use and expand the system (p. 192). Additionally, the RTGs would provide state public utility commissions within a region the collective ability to coordinate and plan transmission activities (p. 192). FERC established rules for the groups, allowing anyone eligible for transmission service to join; RTGs should ensure transmission on an open access basis, be non-discriminatory, and provide for voluntary resolution of disputes (p. 192). Yet, Massey questioned whether the states had the legal authority under the Federal Power Act to order retail wheeling, and he suggested that Congress address the issue statutorily before the courts became involved (p. 193).

Meanwhile, Commissioner James Hoecker testified that FERC sought to limit the market power of transmission owning utilities by requiring them to provide open access to their transmission systems as a condition of ratemaking (p. 186). In return, the Commission allowed utilities to recover stranded costs in the transmission tariffs charged to their wholesale customers if those customers purchased electricity from another source (p. 185). Without such stranded cost provisions, native load customers or shareholders would be forced to pay for any excess transmission costs. In related testimony Commissioner Donald Santa reported that FERC was working on a comparability standard for transmission service under which transmission utility owners must provide service comparable to the service that they provided themselves to other grid participants such as wholesale power generators and qualifying facilities (p. 199). Santa also indicated that FERC understood that contracts served as the basis of electricity-related transactions and tried to enforce pre-existing electricity contracts whenever possible (p. 200).

Some of the issues the testimony of the commissioners raised were clarified further in the question and answer period. In response to a question from Representative Sharp, Commissioner Santa stated that although the Federal Power Act clearly distinguished between distribution and transmission for the purposes of regulatory jurisdiction, the line between them was unclear in restructured markets such as that being developed in California (p. 207). Responding to a question from Representative Gary Franks (R-CT) about whether PURPA contracts for qualifying facilities should be treated as stranded costs because the price for electricity from such

facilities was above the market rate (p. 208), Moler noted that the Commission was not sure how to handle the issue because the facilities needed the higher rates to pay for their expenses; yet by charging the higher rates the facilities were not competitive with the rest of the electricity marketplace (p. 209). This was a particular problem in California, Maine, and New York where customers would be forced to pay higher electricity rates because much of their electricity came from qualifying facilities (p. 209). However, not treating the higher rates for electricity from qualifying facilities as stranded costs likely would require shareholders of the utilities to pay the costs.

Moler also elaborated upon how market restructuring in California would work. If the California Public Utility Commission (CPUC) issued a retail wheeling order for a third party that involved interstate transmission, the party would need to file a rate schedule with FERC (p. 216). The utilities in California that would be subject to the order included Pacific Gas and Electric Company, San Diego Gas and Electric Company, and Southern California Edison Company (p. 216). Finally, in a related matter designed to promote wholesale competition, Moler said that the Commission was considering a fee that utilities could pay to get out of an existing contract to take advantage of cheaper rates (p. 217).¹⁶⁰

FERC Acts in 1994

In 1994, FERC first had to cope with a static budget and the Clinton administration's effort to restrain the number of federal workers. Next, in response to *Ohio Power* FERC had to work with the SEC to ensure that consumers were protected from confiscatory rate increases caused by self-dealing among subsidiaries of utility holding companies. Additionally, FERC continued to implement the Energy Policy Act. Associated challenges included growing market competition among electricity generators, federalism concerns, the use of non-profit RTGs to regulate regional transmission operations, stranded costs, blurring regulatory distinctions, and market restructuring in California. The Agency also confronted how to address the high cost of electricity from qualifying facilities under PURPA.

In 1994 FERC issued four orders (Tables 19 and 20) and four opinions (Tables 21 and 22) that specifically addressed matters associated with the regulation of private electric utilities.

¹⁶⁰ On one hand the Commission wanted to enforce existing contracts, but on the other it sought to take advantage of market forces to lower rates. Locking utilities into existing contracts would negate any advantage of having a generation marketplace.

Two orders involved delegated authority, one was administrative, and one implemented provisions of the Energy Policy Act of 1992. One opinion dealt with a contract dispute over electric service, another addressed a dispute over transmission service, one related to the California and Oregon Transmission Project, and the last was a wholesale rate decision. The Commission also issued 2,255 docketed decisions in 1994, 25% of which were connected to electric utilities (Tables 24-27). Of the latter, 26% involved wholesale or transmission rate decisions (ER), while about 23% concerned exempt wholesale generation status (EG). Another 11% of the decisions related to miscellaneous electric utility filings (EL), and almost 9% were qualifying facility status cases (QF). Moreover, about 7% involved merger, sale, or acquisition decisions (EC), and another 7% related to the issuance of securities or assumption of debt (ES). Finally, FERC issued 16 decisions under section 211 of the Federal Power Act as it was amended by the Energy Policy Act of 1992 (TX). Again, the decisions included both elements for private electric utility regulation in place before the Energy Policy Act and those that emerged as a direct result of the Act.¹⁶¹

To get a fuller perspective of the docketed decisions, it is useful to consider the year-to-year percentage changes for some of the decision types. For example, the number of ER prefix rate decisions declined by 14.5%; yet the number of electric rate cases increased to almost 2,000 in 1994 (Federal Energy Regulatory Commission, 1997, p. 5). This suggests that FERC handled most of its rate cases through informal decision making processes rather than through the formal docketed decision, opinion, or order processes. Next, the number of docketed decisions with the prefix EG (exempt wholesale generator status) increased by 95% as generators (including those affiliated with utilities, not affiliated with utilities, qualifying facilities, and non-qualifying facilities) applied for and received exemptions from PUHCA. Clearly, generators tried to avoid being classified as utilities; it was easier to seek the exemption than to restructure their management structures to be freed from the dictates of PUHCA.

Moreover, the Energy Policy Act encouraged utilities to merge with each other to cope with changes in the law (p. 5). This is reflected by a 105% increase in the number of merger and

¹⁶¹ Pre-Act elements included decisions involving wholesale rates, miscellaneous filings, qualifying facilities, mergers and acquisitions, and the issuance of securities or assumption of debt. Decisions that emerged after the Energy Policy Act included exempt wholesale generator status, transmission rate cases, and transmission services under Section 211 of the Federal Power Act.

acquisition decisions. The Act also evidently brought an increase in the number of miscellaneous electric utility filings as new court cases and regulatory challenges emerged in response to changes in the structure of electric utilities; such decisions increased by 19%. Changes in the statute and regulations may have encouraged an increase in the number of entities seeking to issue securities or to assume debt as well, indicated by the 22.6% increase in ES decisions. At the same time, the number of qualifying facility status decisions declined by 30%. This drop may have reflected that entities seeking to receive such designations had already received them, or that the development of non-qualifying facility exempt wholesale generators made QFs obsolete.

In 1994, the distribution of work at FERC continued to move toward Commission-centric decision making. Cumulatively, the Commission decided 67% of the cases, the office directors 29%, and the administrative law judges 4%. In docketed decision cases, Commission decision making increased by more than 22% from the end of 1993 to the end of 1994, while decisions by office directors grew by 14.8% over the same period. It appears that when Congress wrote the Energy Policy Act of 1992, it abandoned its earlier concerns about more equal distributions of formal Commission decision making.

Network Responses, Federal Regulatory Equilibrium, and State Variations

Once Congress prepared to act in 1990 to pass a comprehensive national energy policy, it did so in the absence of evidence that most electric utilities confronted an immediate financial crisis. Nor was a crisis readily apparent for consumers of electricity as retail prices had remained essentially flat since the mid-1980s. Since at least some legislators had served when stagflation occurred and others remembered the economic problems of the 1970s, many members were vigilant, fearing another energy-induced financial crisis. In contrast, FERC appeared to be far more skeptical. Instead, the Commission focused more on addressing internal problems and on restructuring electricity markets slowly and carefully. When Congress finally passed the Energy Policy Act of 1992, it unleashed a series of forces that would have profound repercussions for the industry, regulators, and consumers.

Private Electric Utilities

From the time stagflation broke in the early 1980s through the mid-1990s, investor-owned electric utilities saw a slight but steady year-to-year improvement in their financial conditions. In the meantime, in 1990 utilities were still required to purchase electricity from and

to sell electricity to qualifying facilities (QFs) when FERC directed. Such sales also had to occur at prices the Commission established. Unfortunately for the private utilities at the time, the prices charged for electricity from QFs exceeded the average market rate. This was particularly a problem for utilities in California, Maine, and New York, which relied upon electricity purchased from QFs for much of their needs. Utilities generally were prohibited from making up for the cost of electricity from QFs through higher wholesale or retail rates, meaning shareholders often had to foot the bill for the additional cost of electricity.

In addition, utilities were beginning to face a new set of opportunities and challenges. Some members of Congress had been pushing for more competition in the electric utility industry since at least the late 1970s. By 1990 competition emerged in various ways. First, due in part to PURPA's QF provisions, more non-utility electricity generators emerged that sought to sell the electricity that they were producing to utilities. One barrier to these transactions had been the utility industry's reliance on long-term contracts for electricity sales. Other hurdles included FERC's inability to issue mandatory transmission service or interconnection orders under the Federal Power Act. Without the ability to get such orders, utilities could not guarantee access to cheap electricity even if they purchased it unless they had transmission access. The Energy Policy Act of 1992 ultimately resolved the access problem.

Even after the Energy Policy Act was enacted utilities continued to face increasing oversight and regulation due to environmental problems caused by the existence and operation of the grid systems. Moreover, the Act was designed to encourage more competition among electricity generators but the competition raised concerns about the potential for reliability problems with the transmission systems utilities operated. As a result, FERC expected utilities to provide transmission access. The Commission also encouraged them to build more transmission facilities to ensure greater system reliability, though siting decisions were left with the states. Relatedly, decisions on market restructuring requiring utilities to divest either transmission or generation assets were left to elected state officials and state public utility commissions to decide. Yet, utilities were given the opportunity to own stand-alone wholesale generation facilities, which many chose to do.

State Public Utility Commissions

Both market restructuring and the Energy Policy Act of 1992, which further encouraged such restructuring, created serious questions for state PUCs. No longer would the division of

regulatory authority be as clear as it had been under the Federal Power Act of 1935. Market restructuring blurred the distinction between electricity distribution and transmission, making it more difficult to determine where state authority ended and federal authority began. Under the FPA, states had regulated even interstate distribution and retail sales of electricity, while the federal government regulated transmission and wholesale sales. Other questions arose as well, such as how to handle conflict between states in market restructuring cases and whether retail wheeling was legal for the states to engage in under the provisions of the FPA. Finally, it was unclear after *Ohio Power* if the states could continue to regulate the activities of electric utility affiliates of holding companies.

The question became how to handle these blurring regulatory distinctions. Consensus had grown over time that the old monopoly structure of private electric utilities would be replaced by a bifurcated industry structure. This new structure meant that there would be separate generation and transmission companies; they would no longer be vertically integrated monopolies as they had been in the past. Unfortunately for the state public utility commissions, their entire regulatory structure was designed around the monopoly operating structure for private electric utilities where one utility provided all of the generation, transmission, and distribution of electricity in an assigned area or region.

The blurring regulatory distinctions, coupled with the need for state PUCs to change how they operated, created tension between the PUCs and FERC. Commissioners at FERC were wise enough to understand that as states transitioned to market restructuring, tensions would increase between their Agency and the state public utility commissions. The Commissioners also recognized that they had not paid attention to establishing informal relationships with other local, state, and federal agencies to cope with issues marked by regulatory overlap and underlap. With market restructuring FERC could no longer afford to ignore developing these kinds of relationships, especially with state public utility commissions. Such new relationships between FERC and the state PUCs would have to be characterized by comity, marked by effective communication and regulatory deference. Such comity would mean that a state PUC and FERC needed to work collaboratively to figure out who had regulatory authority in particular cases; when regulatory authority was established the entity with the authority had to be given deference in how it chose to handle the matter in question. Additionally, FERC supported the creation of regional transmission groups (RTGs) to manage and operate the transmission system in a given

region of the country, and the states that were members of such a group provided input into the operation, maintenance, and development of the transmission system in their region.

Consumers

As has been noted, in the early 1990s little evidence suggests that consumers were worried about electricity rates as they had been during the stagflation era. Some members of the public were more concerned over the potential for environmental damage caused by utilities, and this was reflected in the legislation Congress considered prior to the Gulf War. This point underscores that for Congress the Gulf War was more of a perceived than an actual crisis. In an actual crisis congressional action is driven by public demands for action, while the passage of the Energy Policy Act of 1992 evidently took place with little public concern about the potential for another energy crisis.

Qualifying Facilities

PURPA established qualifying facilities; between 1978 and the early 1990s the size limitations in the original statute for many types of QFs were lifted. Moreover, holding companies that originally were denied ownership stakes were allowed to own interests in such facilities. By the 1990s some of the luster seemed to be coming off of QFs. Part of the diminishing interest may have reflected that all of the facilities wishing to gain the designation had done so. Another factor may have been the growth in non-qualifying facility wholesale generators, which made QFs obsolete. The attraction of QFs may have been damaged further by FERC-approved rates that were not competitive in the marketplace.

Regional Reliability Entities, NERC, and Regional Transmission Groups

Regional Reliability Entities and the North American Electric Reliability Council had existed since the late 1960s. These non-profits were funded and staffed by the private electric utilities, and they were dedicated to ensuring the reliability of the interstate transmission system for electricity to prevent large scale power blackouts. Yet it is odd that Congress and FERC did not have these Entities take a more central role in the development of market restructuring for electric utilities. Perhaps Congress and FERC believed that they already had enough to do or that the Entities and NERC were too closely affiliated with the utilities to be unbiased arbiters of the restructured marketplace. Instead, FERC encouraged the development of non-profit regional transmission groups to manage and operate the regional transmission systems throughout the United States.

FERC wanted RTGs to regulate grid reliability planning on a regional basis and to settle most transmission conflicts voluntarily, so the Commission only became involved in transmission cases when necessary. The RTGs also were designed as a way for the member states to have input into transmission planning and coordination, and by extension lessen some of the existing regulatory tension between FERC and the state PUCs due to market restructuring uncertainties. Users and operators of the transmission system would develop their own rules over how the system could and should be used through membership in the relevant RTG. FERC set the membership terms for the groups, and the Commission expected them to provide open transmission access.

Other State and Federal Agencies

Throughout much of its history FERC had made a conscious choice to avoid getting involved in regulatory matters outside of its jurisdiction. For example, until Congress compelled it, FERC had left the environmental regulation of private electric utilities to local and state departments of environmental quality and to the national Environmental Protection Agency. Additionally, it had left land use choices involving siting utility facilities on federal land to the Federal Park Service and the regulation of utility holding companies under PUHCA to the Securities and Exchange Commission. Due to *Ohio Power*, however, FERC was pushed to work with the SEC to ensure the protection of ratepayers when the SEC made decisions related to self-dealing by affiliates of utility holding companies. Market restructuring itself also forced FERC to actively engage with state public utility commissions on regulatory matters. More and more, whether due to congressional actions, federal court decisions, or to market restructuring, agencies were both expected and required to work together to achieve positive regulatory results across different levels of government and policy domains. As FERC Commissioner Bailey had suggested, the failure of different agencies to work together in response to market restructuring could lead to catastrophic regulatory failure.

Exempt Wholesale Generators

As market restructuring continued, one result was the development of stand-alone electricity generators. The generators became exempt wholesale generators once they applied to FERC and received an exemption from PUHCA. These stand-alone generators could be qualifying facilities, non-qualifying facilities, unaffiliated with utilities, or affiliated with existing utilities in the United States. However, they could not be utilities where one company owned the

generation, transmission, and distribution facilities in a particular part of the country. These new generators became the backbone of the restructuring movement and provided the electricity required by the transmission owning utilities that had largely divested their generation assets.

Reasons for Wholesale Market Variations across the States

Prior to the passage of the Energy Policy Act of 1992, market competition for electricity generation was growing; it was constrained, however, by FERC's inability to issue mandatory transmission or wheeling orders under the Federal Power Act as well as other factors. The EPAct eliminated many of those constraints once its implementation established a new federal regulatory equilibrium and later state actions eliminated others.

Differences in avoided cost formulas were one source of the variation in development of wholesale electric power generation markets in the states. States like California, New York, and Maine had established generous avoided cost formulas to encourage the development and use of qualifying facilities under PURPA. These states were successful enough that qualifying facilities provided a significant portion of their electricity generation needs. This success came at a cost, however: consumers in those states were locked into higher rates than consumers in other states that did not get electricity from qualifying facilities. States with sufficient electricity generation sought to discourage the use of qualifying facilities by creating less generous avoided cost formulas.

A second source of the variations existed because of the fuels used to power generation facilities as it influenced rates, and higher rates made wholesale competition a more attractive option. It is important to recall that, for example, part I of the Federal Power Act set specific requirements that FERC had to enforce when regulating hydroelectric and related waterway projects used to generate electricity. The Commission also was required to consider the environmental impact of such facilities. It had to regulate the environmental impact of small hydroelectric projects built under PURPA,¹⁶² while the regulation of the environmental impact of other power sources generally was left to the Environmental Protection Agency and state departments of environmental quality. Coal-fired power plants fell under the purview of the Clean Water and Clean Air Acts, and EPA and state departments of environmental quality

¹⁶² Small hydroelectric qualifying facilities originally were carved out of the environmental regulations under PURPA. However, due to environmental damage these smaller projects caused, Congress gave FERC authority to regulate their environmental impact as well.

regulated their emissions to help mitigate acid rain. Nuclear power plants were regulated primarily by the Nuclear Regulatory Commission (NRC). Meanwhile, elements of natural gas production had been deregulated in 1989, establishing free market rates for the fuel. Due in part to these regulatory differences and the distance of these fuels from power generation plants,¹⁶³ some fuel sources produced cheaper electricity than others, with the cheapest electricity often coming from hydroelectric facilities and the most expensive (when considering government subsidies and the storage of waste) from nuclear power.¹⁶⁴

Third, differences in siting regulations across the fifty states and Washington, D.C. both before and after the passage of the Energy Policy Act of 1992 were in part responsible for the variations for private electric utilities. Siting generation, transmission, and distribution facilities continued to be far more difficult in some states than in others. These differences help explain why states like California, Maine, and New York relied more on qualifying facilities and wholesale competition to provide electricity as it would have been too difficult to site generation facilities for utilities.

The Energy Policy Act of 1992 and FERC's implementation of it established additional sources of variation. It was up to state elected officials and subsequently state public utility commissions to decide whether a state would participate in market restructuring. If a state chose not to participate, then it would allow a utility to build its own generation facilities, which the states would regulate. Yet, if a state chose to participate in market restructuring, FERC would regulate the resulting facilities, which required that generation facilities be built by third party non-utilities. Like California, states also could opt to restructure certain utilities, as it did with Pacific Gas and Electric, San Diego Gas and Electric, and Southern California Edison, while letting other private utilities operate under the pre-existing monopoly structure and regulatory system. Stand-alone generators including qualifying facilities also could apply to FERC for

¹⁶³ When power generation plants were located near a fuel source, the subsequent electricity prices are cheaper than when fuel has to be moved many miles to a power plant to produce electricity.

¹⁶⁴ When comparing fuel sources and prices among states, one sees that states that get most of their electricity from either hydroelectric power or coal generation tend to pay less per kilowatt than states where most consumers purchase electricity from generators that use other fuel sources (U.S. Energy Information Administration, 2013c; 2013d).

exemptions from PUHCA to avoid reorganizing their corporate structures to prevent being classified as a utility.

Other potential sources of variation following the Energy Policy Act included FERC's new-found authority to issue mandatory orders. Under the terms of the Act, FERC could issue mandatory orders requiring transmission access, transmission interconnection, and wheeling. This could produce regulatory differences across the country because one would expect that states that relied upon third party generation would be more likely to have utilities subject to such mandatory orders. In most cases in states that opted not to restructure, utilities still owned all of the generation, transmission, and distribution facilities within a given area, and thus usually did not need orders for transmission access, interconnection, or wheeling. In states that opted to transition to wholesale markets, however, these mandatory orders would be necessary as such markets could not operate without them, since the ownership of generation and transmission facilities would be split between different companies. Moreover, FERC established the terms, rates, and charges for transmission activities in wholesale markets and regulated transmission in un-restructured markets.

To further implement the Energy Policy Act, FERC encouraged the development of regional transmission groups to improve transmission reliability, planning, and access. Prior to the Act's passage, FERC had resisted congressional proposals to create similar regional entities because it was concerned that doing so could lead to dueling state regulatory standards and result in regulatory gridlock. As mentioned earlier, FERC was willing in some cases to defer to agreements about transmission among states as long as the agreements did not discriminate or produce unjust and unreasonable rates, terms, or conditions. It is unclear whether FERC addressed the potential for conflict among states over transmission issues and over how to respond to such conflict. In cases of conflict among the states, no matter what FERC decided to do it ran the risk of upsetting at least some states, limiting the benefit of RTGs.¹⁶⁵

Although RTGs were supposed to help alleviate some of the uncertainties states faced due to market restructuring, it is unclear to what extent these entities helped to address such uncertainties or simply made them worse. Meanwhile, the ambiguities created by the Energy Policy Act of 1992 and its implementation affected regulation in all states to some degree. In

¹⁶⁵ The RTGs were supposed to lessen conflict between states going through market restructuring and FERC by providing ways for the states to influence transmission policy.

states that chose to maintain the monopoly structures for electric utilities, the effects were more limited. For example, when an electric utility built a new generation facility such states would regulate it under the monopoly structure. However, this did not preclude the development of stand-alone generators whose activities FERC regulated. When utilities in monopoly states purchased electricity from a third party generator, they were required to follow the Energy Policy Act.

States that decided to restructure their electricity markets, on the other hand, required utilities to divest either their generation or transmission assets. After divestment, states required transmission utilities to purchase electricity from a third party generator. FERC regulated these transactions. In this process, it was unclear where state regulation ended and federal regulation began as distinctions between the distribution and transmission of electricity became blurred. Although third party transactions created a stranded cost problem for utilities in all states, they produced major problems in states that transitioned to wholesale markets because of the sheer number of transactions involved. Finally, retail wheeling was used in restructured states but FERC questioned its legality under the Federal Power Act. Regulatory differences occurred among wholesale market states primarily because there was no standard market design (SMD). Each state was allowed to establish its own set of rules and regulations for the operation of its markets with the wholesale provisions subject to review and final approval by FERC. Regulatory differences between these states also occurred based upon whether they belonged to an RTG.

Also unclear was how electricity transactions would be regulated between entities in a monopoly state and a restructured state. In other words, could the states involved work out an agreement that FERC would accept? It also was not clear whether the different regulatory arrangements in the two states might serve as an impediment to a final agreement.

Patterns

In this chapter, I argue that the Gulf War energy crisis was more of crisis perceived by legislators than an actual one. Real and nominal electricity rates from 1990 to 1994, debt-to-equity ratios, net operating incomes, and bond ratings all support the conclusion that the Gulf War did not pose a crisis for electric utilities. Evidence that legislators perceived a crisis included the number of bills introduced in Congress from 1990 to 1994, statutes, and budgets. Finally, to indicate FERC's level of concern about the perceived crisis and its response to the

passage of the Energy Policy Act, I examined the numbers and type of orders, opinions, and docketed decisions.

Utility Performance

Nominal national retail rates of electricity increased by two percent in 1990 and three percent in 1991 (U.S. Energy Information Administration, 2012). After the war, nominal rates grew by between -0.2% and 1.5%. Any suggestion that the war produced an economic crisis for electric utilities is offset by the real national retail rates of electricity between 1990 and 1994. In 1990 real retail rates declined by two percent; they declined by one percent in 1991 and continued to decline after the war ended (U.S. Energy Information Administration, 2012). Even in the midst of the Gulf War consumers should not have seen an increase in electricity rates sufficient enough for them to notice once the rates were adjusted for inflation. Nor does any evidence suggest that consumers were upset about the price of electricity as they had been during stagflation. Moreover, the small increase in nominal rates and the decline in real rates in 1992 may indicate that any concerns about the price of energy for utilities had largely evaporated, and the decline of both rates in 1994 may suggest that initial efforts to restructure electricity markets after the enactment of the 1992 Energy Policy Act had a small positive effect.

Although electricity rates provide a clue about the economic performance of private electric utilities, other information also is useful in determining how well utilities were performing financially. From 1990 to 1994, the average debt-to-equity ratios for utilities improved every year (U.S. Energy Information Administration, 1995, p. 29). Even though utilities had more debt than equity, the gap narrowed each year, suggesting that the financial condition of electric utilities continued to improve slightly. Moreover, the data suggest that the Gulf War had little if any impact on the financial condition of electric utilities. Net operating income for major private electric utilities remained essentially flat, and the percentage of utilities with an A- or better bond rating remained between 60 and 63 percent (U.S. Energy Information Administration, 1996b, p. 555).

Congressional Response

Even though financial indicators for electric utilities remained consistent and stable, some legislators were deeply concerned over the potential for an energy crisis due to the Gulf War. This concern found expression in the number of bills introduced affecting FERC's jurisdiction and in appropriations increases. In 1991, when the war reached its zenith, the number of bills

introduced in Congress specifically referencing FERC's regulatory jurisdiction spiked to 37, and the Agency received its largest percentage increase in appropriations in this era, a 15% annual increase for fiscal year 1992 (P.L. 102-104; 105 Stat. 531; Table 15). After both the passage of the Energy Policy Act of 1992 and the end of the war, the number of bills introduced and the appropriations increases declined.

FERC's Response

Congressional testimony suggests that FERC did not perceive that an energy crisis existed. If it had been concerned, then the number of orders in a given year should have increased and the opinions issued should have increased the following year. Yet, 1991 had the fewest orders issued over the five year period (Tables 19-20). The increase of opinions in 1992 was minimal and could have resulted from passage of the Energy Policy Act. The increases in the number of orders issued in 1992 through 1994 from a low in 1991 also was likely the result of the passage of the Act. Similarly, the number of docketed decisions increased following the Act's passage.

Conclusion

When the Gulf War started in 1990 many legislators seemed convinced that the country was headed toward another energy-induced national economic crisis. Their concern was belied by the reactions of consumers, utilities, and FERC. Despite contradictory evidence, members of Congress began to push ahead with plans to develop a national energy policy designed to address an energy emergency that had not yet occurred and would not appear. Their efforts resulted in the passage of the Energy Policy Act of 1992. This legislation would help unleash a series of forces that would produce the next energy crisis.

Chapter 7

Market Restructuring and the 2003 Northeast Blackout

Congress passed the Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2776), seeking to prevent another energy-induced economic crisis, this time in response to the Gulf War. Proponents of the legislation contended that it would lower electricity rates, improve grid reliability, lessen the environmental impact of energy production, and reduce American dependence on foreign sources of energy. Buried in the statute were provisions designed to allow the states to choose whether they wanted to maintain the existing regulatory and industry structures for private electric utilities or opt for market restructuring and the resulting competition among wholesale power generators.

By 2000, however, something clearly was wrong with wholesale competition; some of the states that selected it were seeing abnormally high wholesale electricity price spikes. Then in 2003, a major power blackout occurred, affecting several states that had chosen to encourage development of wholesale electricity markets. This chapter explores what happened and the responses of Congress, FERC, and other network actors.

Historical Summary: 1995 to 1999

Economic Condition of the Industry

Between 1995 and 1999 the private investor-owned electric utility industry produced mixed economic results. The average national nominal retail rate of electricity declined by a little more than three and a half percent (see Table 4), and the average national real retail rate of electricity declined by more than nine percent (U.S. Energy Information Administration, 2012). Although desirable to consumers, the numbers failed to reflect an event that would presage difficulties in wholesale electric rates. In one week in June 1998, states in the Midwest saw the wholesale price of electricity in the spot market increase from roughly “\$25 to as much as \$7,500 per megawatt hour” (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1999, pp. 17-18). The rate spike was the first real indication that something might be wrong that Congress or FERC needed to address.

Economic indicators for utilities also began to suggest problems with the industry. In 1995 and 1996 the average debt-to-equity ratios improved (Table 28); however, the ratios deteriorated in 1997 and 1998, only to briefly rebound in 1999 before declining again in 2000 (U.S. Energy Information Administration, 1996, p. 31; 2002, p. 35). Meanwhile, net operating

incomes for major investor-owned electric utilities peaked in 1995 (Table 29), then waned each year from 1996 to 1998; although it increased by almost \$2 billion in 1999, it experienced a substantial setback in 2000 (U.S. Energy Information Administration, 2011, p. 68; 2003, p. 50). Finally, in 1995 63% percent of electric utilities had an A- or better bond ratings (Table 30; U.S. Energy Information Administration, 1996b, p. 555), while the percentage of utilities having such ratings wilted to just over 40% in 2001 (McDermott, 2012, p. 20).

States Opting for Market Restructuring

Between 1995 and 2000 22 states passed legislation designed to restructure their wholesale electricity markets (Table 6; U.S. Energy Information Administration, 2010). Whether elected officials in a state chose to do so seemed to be influenced by rates as much as any other factor (Andrews, 2000; Ka & Teske, 2002). When states restructured, they could design their wholesale electricity markets as they wanted to, with the caveat that they needed to get FERC's approval; the Commission might ask the state submitting the market design proposal to make certain modifications before granting final approval. States that selected this option appeared to have greater performance problems with their utilities in terms of finances, rates, and reliability. Rate performance problems occurred in part because utilities in such states were subject to wholesale rate increases without the need for FERC approval; utilities in un-restructured states might be required to pay higher wholesale electricity rates but only after they were approved by the Commission.¹⁶⁶ Rate problems also appeared to be associated with financial and reliability difficulties (as the chapter details).

The ability of states to make choices about how these new markets were designed led to significant differences in both their structures and their effects. Nowhere was this more evident than in California. The California statute designing the new electricity marketplace included Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SOCAL) (Joskow, 2001, p. 365; U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1994a, p. 216). An agreement between the utilities, the State, and FERC removed wholesale price caps for the rates charged to the utilities for electricity, while the State imposed caps on retail rates for PG&E and SOCAL

¹⁶⁶ FERC reserved the right to act even in restructured states if it determined that the rates being charged for wholesale electricity were excessive under the Federal Power Act (P.L. 74-333; 49 Stat. 838-863); it could impose wholesale price caps in such cases.

but not SDG&E (Joskow, 2001, p. 365; Wolak, 2005, p. 152). Meanwhile California officials urged the three utilities to divest their fossil fuel generation capacity, forcing the companies to rely on the more expensive and easier to manipulate spot and day-ahead wholesale electricity markets (Joskow, 2001, p. 369; Wolak, 2005, p. 152).¹⁶⁷ Essentially, California in concert with other actors including the federal government and frequently shady wholesale electricity traders had established a new industry and regulatory design. It would produce an electricity crisis, causing many states to rethink the benefits of wholesale market restructuring.¹⁶⁸

Congressional Action 1995 to 1999

In 1994 Republicans won control of both houses of Congress. Legislators became increasingly concerned in this period about electricity restructuring and wholesale competition. Initially, the electric utility industry appeared to be financially stable and rates declined in 1995; only one House bill, the “Ratepayer Protection Act” [H.R. 2562, sponsored by Representative Cliff Stearns (R-FL)], addressed electricity rates (Thomas, 2013o).¹⁶⁹ The biggest impact of the change in party control was FERC’s appropriations. The smaller FY 1996 FERC appropriation, \$131.29 million (Table 15), a 21% reduction, reflected the more fiscally conscious Congress and President (P.L. 104-46; 109 Stat. 416).

Additionally, the House held at least one hearing on FERC’s proposed rules for the electric utility industry (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996d). The Senate held at least two hearings on utility-related matters; one examined FERC’s efforts to establish wholesale electricity markets (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1995), and another reviewed S. 708 [introduced by Senator Don Nickles (R-OK)] to repeal the requirement that utilities purchase electricity from

¹⁶⁷ Californians also paid higher electricity rates on average, because as Chairwoman Moler testified, more of their electricity came from qualifying facilities (cogeneration and small power production facilities, some of which were located in other states) than most other states (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1994a, p. 209).

¹⁶⁸ The California electricity crisis will be discussed in more detail below.

¹⁶⁹ The bill, as did S. 708, sought to lower electricity rates for consumers by repealing the provision in PURPA that required utilities to purchase electricity from qualifying facilities (Congressional Research Service, 2013s).

qualifying facilities (U.S. Congress. Senate. Committee on Energy and Natural Resources. Subcommittee on Energy Production and Regulation, 1995).¹⁷⁰

Legislators started to address problems associated with restructuring and wholesale competition as they became more apparent in 1996. Some members clearly were interested in either clarifying the elements of the transition to such competition or amending its provisions.¹⁷¹ Representative Frank Pallone (D-NJ) addressed potential environmental impact by introducing H.R. 4316, which would have placed a moratorium on retail wheeling until air pollution problems could be addressed; the legislation remained in subcommittee (Thomas, 2013p). Finally, a House resolution, H.J.RES.178 [introduced by Representative Bob Franks (R-NJ)], expressed opposition to FERC orders 888 and 889 designed to implement elements of competition; the resolution also remained in subcommittee (Thomas, 2013p).

In 1996, Congress appropriated \$146.29 million for FERC's fiscal 1997 budget, an 11.4% increase over the previous year (P.L. 104-206; 110 Stat. 2998; Table 15). Members also paid a great deal of attention to important utility issues. In one hearing, for example, the House Subcommittee on Energy and Power examined the influence of PURPA on the creation of electric market competition (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996e); later in 1996 the subcommittee examined how the states were coping with the transition to wholesale markets (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996b). Moreover, the same subcommittee held related hearings on problems caused by market competition (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996f), on FERC's open transmission access rule (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996c), and on the future of electricity regulation (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1996a). In the meantime, the Senate

¹⁷⁰ Neither H.R. 2562 nor S. 708 passed.

¹⁷¹ See H.R. 2929 [sponsored by Representative Edward Markey (D-MA)], H.R. 3782 [also sponsored by Markey], H.R. 3790 [sponsored by Representative Dan Schaefer (R-CO)], H.R. 4297 [sponsored by Representative Tom Delay (R-TX)], and S. 1526 [sponsored by Senator Bennett Johnston (D-LA)]. Each of the bills dealt with elements of electric utility competition and consumer choice; however, they all died in subcommittee (Thomas, 2013p).

Committee on Energy and Natural Resources held a two-part hearing on competitive changes occurring in the electric utility industry (1996a, 1996b).

Again in 1997, legislators introduced a number of bills designed to address matters related to private electric utility regulation.¹⁷² All focused on various elements of competition and consumer choice (Thomas, 2013q). At the same time, H.R. 2909 [introduced by Representative Frank Pallone (D-NJ)] would have required FERC to impose cap-and-trade requirements on fossil fuel fired power plants (Congressional Research Service, 2013t). All of the bills remained either in subcommittee or in committee.

Perhaps making up for the large appropriation reduction FERC received in FY 1996, Congress appropriated \$162.14 million for fiscal 1998, a 10.8% increase over the previous year (Table 15; P.L. 105-62; 111 Stat. 1334). Legislators also continued to perform their oversight responsibilities over the regulatory and structural changes occurring in the electric utility industry. Throughout 1997 the House Subcommittee on Energy and Power held hearings on matters related to the establishment of wholesale electricity markets. The topics ranged from consumer choice for electricity (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1997a), to reliability and competition (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1997d), to innovation and competition (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1997e), to federal and state roles in competition (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1997c). The subcommittee concluded with hearings on legislation designed to clarify or to amend the restructuring process (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1997b).

The Senate Committee on Energy and Natural Resources also held a number of hearings on similar issues. These hearings examined competitive changes in the electric utility industry (U.S. Congress. Senate. Committee of Energy and Natural Resources, 1997), while a subcommittee examined local perspectives on such changes (U.S. Congress. Senate. Committee

¹⁷² H.R. 338 [introduced by Representative Cliff Stearns (R-FL)], H.R. 655 [introduced by Representative Dan Schaefer (R-CO)], H.R. 1230 [introduced by Representative Tom Delay (R-TX)], H.R. 1960 [introduced by Representative Edward Markey (D-MA)], S. 237 [introduced by Senator Dale Bumpers (D-AR)], S. 722 [introduced by Senator Craig Thomas (R-WY)], S. 1276 [introduced by Senator Jeff Bingaman (D-NM)], and S. 1401 [introduced by Senator Dale Bumpers (D-AR)] (Thomas, 2013q).

on Energy and Natural Resources. Subcommittee on Energy Research, Development, Production and Regulation, 1997).

Congressional interest and concern continued into 1998 as witnessed by the number of bills introduced to address issues pertinent to competition, consumer choice, and rate relief.¹⁷³ In previous years legislation had focused on competition and consumer choice questions, but with the wholesale price spikes in the Midwest in the summer of 1998 it became clear that under certain circumstances market restructuring could produce sudden and large increases in wholesale electricity prices. How such wholesale price increases were handled could impact retail consumers, utilities, stockholders, and even regulators in negative ways. However, no consensus emerged on how to deal with these wholesale price issues.

While legislators remained concerned about the transition to wholesale markets, Congress appropriated \$167.5 million for FERC in FY 1999 (Table 15), slightly more than a three percent increase over the previous year (P.L. 105-245; 112 Stat. 1851). At the same time, the Senate held hearings on the Midwest price spike. The hearings revealed that FERC staff had completed a report on why prices rose so rapidly and on what might be done to prevent such increases from happening in the future (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1999). The factors causing increases in wholesale spot market prices included hot weather, supply uncertainty, transmission limitations, vague price information, and mistakes by inexperienced market participants (pp. 18-19). The staff recommended improved communication among all actors in the regulatory network, the establishment of non-profits to manage the operation and planning of the transmission systems, better monitoring and regulation of the competitive markets, and the development of real-time reliable wholesale price and transmission information for market participants (p. 19).

FERC proposed a way forward to make the transition to markets work; whether the shift would work remained an open question. Uncertainty over the direction and degree of success of such changes for electric utilities pushed members to introduce a number of bills in 1999 aimed

¹⁷³ H.R. 4183 [introduced by Representative Gerald Solomon (R-NY)], H.R. 4432 [introduced by Representative Tom DeLay (R-TX)], H.R. 4511 [introduced by Representative James Walsh (R-NY)], H.R. 4715 [introduced by Representative Richard Burr (R-NC)], H.R. 4798 [introduced by Representative Dennis Kucinich (D-OH)], S. 2287 [introduced by Senator Frank Murkowski (R-AK)], S. 2381 [introduced by Senator Connie Mack (R-FL)], and S. 2419 [introduced by Senator Alfonse D'Amato (R-NY)] (Thomas, 2013r).

at competition, consumer choice, rate relief, and transmission reliability.¹⁷⁴ Transmission reliability evidently was added to the list of concerns after the Midwest wholesale price fiasco. The growing list of bills also suggested the absence of legislative consensus over how to address problems created by electricity competition.

As Congress continued to struggle with policy questions surrounding electric utilities, it appropriated \$174.95 million for FERC in FY 2000, more than a four percent increase from the previous year (P.L. 106-60; 113 Stat. 494). Congressional committees and subcommittees held a number of hearings on electric utilities in 1999.¹⁷⁵

Cumulatively, from 1995 to 1999 legislators became increasingly aware that something was not quite right with the wholesale market transition. This recognition found expression in the growing lists of congressional hearings and bills designed to either clarify or amend how the restructuring process should or would occur. Yet, this mounting concern did not translate into

¹⁷⁴ In the House alone, several bills addressed at least one of the topics, including H.R. 667 [introduced by Representative Richard Burr (R-NC)], H.R. 971 [introduced by Representative James Walsh (R-NY)], H.R. 1138 [introduced by Representative Cliff Stearns (R-FL)], H.R. 1587 [introduced by Representative Stearns], H.R. 1828 [introduced by Representative Tom Bliley (R-VA)], H.R. 2050 [introduced by Representative Steve Largent (R-OK)], H.R. 2569 [introduced by Representative Frank Pallone (D-NJ)], H.R. 2602 [introduced by Representative Albert Wynn (D-MD)], H.R. 2645 [introduced by Representative Dennis Kucinich (D-OH)], H.R. 2786 [introduced by Representative Tom Sawyer (D-OH)], H.R. 2884 [introduced by Representative Bliley], H.R. 2944 [introduced by Representative Joe Barton (R-TX)], and H.R. 2947 [introduced by Representative Jay Inslee (D-WA)] (Thomas, 2013s). Bills introduced in the Senate addressing the same topics included S. 282 [introduced by Senator Connie Mack (R-FL)], S. 516 [introduced by Senator Craig Thomas (R-WY)], S. 1047 [introduced by Senator Frank Murkowski (R-AK)], S. 1273 [introduced by Senator Jeff Bingaman (D-NM)], and S. 1369 [introduced by Senator James Jeffords (R-VT)] (Thomas, 2013s).

¹⁷⁵ The House Subcommittee on Energy and Power, produced an exhaustive three volume report based on hearings that covered nearly every aspect of electric power competition and restructuring (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1999c). Additionally, the subcommittee held hearings on electric restructuring legislation (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1999a), and two other hearings on “The Electricity Competition and Reliability Act” (H.R. 2944) (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1999b). Similarly, the Senate Committee on Energy and Natural Resources held hearings on retail competition (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1999c), electricity-related technology (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1999a), and legislation addressing matters relevant to competition (U.S. Congress. Senate. Committee on Energy and Natural Resources, 1999b).

the passage of legislation. It would take two more major regional crises before Congress would act.

FERC's Actions from 1995 through 1999

Prior to the passage of the Energy Policy Act of 1992 Congress generally tried to curb the demands it placed upon FERC because of the Agency's limited budget and staff. Indeed, at least some of the efforts to either de-federalize or deregulate elements of energy regulation formally under the Commission's control sought to help alleviate some of FERC's burden and allow it to focus on matters of greater importance. Congressional support for more informal regulatory decision making also was designed to lessen the burden on the Commission, with more decision making delegated to agency staff. The EPAct of 1992 changed this.

The Act included provisions designed to allow states to opt for competitive wholesale markets. As FERC Commissioner Branco Terzic testified, however, when states chose to transition to such markets it necessarily meant that utilities would be required to purchase electricity from a third party source, and FERC would regulate such transactions (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Power, 1993, p. 76). In contrast, if a state chose to allow utilities to build their own generation facilities, state public utility commissions regulated the activities of such facilities. Essentially, then, the development of wholesale markets placed more regulatory authority with FERC, taking it away from the states.

As states chose to restructure their wholesale markets between 1995 and 2000, FERC's case load grew exponentially. For example, this transition was responsible for expanding the total number of rate filings per year from just over 1,000 in 1993 to almost 7,000 in 1997 as the bifurcation of the utility industry between generation facilities and transmission facilities in restructuring states required significantly more rate filings than occurred in states with the traditional monopoly industry structure and regulatory system (Federal Energy Regulatory Commission, 1997, p. 5). In states where different companies owned generation and transmission facilities, all of the companies involved in wholesale activities had to apply to FERC on rate issues expanding the number of such filings. Even in cases where wholesale prices ended up being uncapped, as happened in California, companies first had to apply to FERC in consultation with and the approval of the affected state public utility commissions and gain the Commission's approval. The Commission reserved the right to act under the Federal

Power Act if it determined that wholesale rates were excessive, whether they were capped initially or uncapped, and it could impose price caps at a rate FERC deemed appropriate. Moreover, when utilities were required to transition to the establishment of wholesale markets such restructuring encouraged them to merge as they coped with the loss of their status as vertically integrated monopolies and shifted to a system where they could own some but not all of the generation or transmission systems in a region (p. 5). Mergers added to FERC's work, since the Commission had to approve them. Finally, as chapter 6 described, the transition to wholesale markets brought blurring regulatory boundaries that encouraged entities involved in the regulatory process to file complaints with FERC that the Commission had to adjudicate. As a result of all of these factors, the Agency saw a marked increase between 1994 and 2000 in the number of formal docketed decisions for complaints (prefix EL), mergers (EC), and rates (ER) (Table 25).

Beyond the growth in FERC's formal and informal decisions, market restructuring produced another result that is worth mentioning. Prior to the passage of the Energy Policy Act of 1992, Congress and the Commission delegated more decision making to office directors. Although it is difficult to tell the impact on informal decision making, the Act clearly pushed a larger percentage of formal cases toward the Commission beginning in 1993 (see Table 26). By 2000 more than half of FERC's formal docketed decisions related to electric utilities. In contrast, between 1977 and 1986 and 1990 and 1994, between 18% and 38% of formal docketed decisions were electricity-related, respectively (Table 24).

Ironically, just as FERC's workload increased, Congress and President Clinton approved the 21% cut in appropriations. Despite the reduction, the Commission had to continue to issuing orders, opinions, and docketed decisions. Two of the orders issued in this period deserve more thorough examination because of their importance to the development of electricity markets. These orders promoted wholesale competition by attempting to prevent transmission access from becoming a barrier to such competition.

Order Number 888 required all utilities to provide open transmission access to allow for wholesale wheeling activities, and it permitted utilities to seek remuneration for all "reasonably incurred" stranded costs involved in such activities (Federal Energy Regulatory Commission, 1996a). Without required transmission access, electricity generators likely would have had difficulty finding ways to sell their product, and utilities would have been less inclined to provide

transmission access if their customers or their shareholders had to pay part of the cost of wheeling without stranded cost recovery. The order also encouraged the development of non-profits, at first independent system operators (ISOs) and later regional transmission organizations (RTOs),¹⁷⁶ to manage the nation's transmission systems on a day-to-day basis, ensuring open transmission access for wholesale wheeling purposes, and to plan for the interconnection and development of new transmission systems.

Second, order number 889 established a real-time information system for wholesale market participants. Known as the "Open Access Same-Time Information System," OASIS was designed to provide information on transmission access including rates and capacity (Federal Energy Regulatory Commission, 1996b). Overall, OASIS was supposed to allow electricity generators to plan when and how much electricity they would produce based upon available transmission access and the cost of transmission.

Although FERC faced a number of challenges between 1995 and 1999, turnover of the commissioners was fairly limited,¹⁷⁷ providing some stability as the Agency navigated the uncharted territory of market competition for electric utilities. Soon, however, FERC faced a major problem, which would be a stern test: the California electricity crisis.

California Electricity Crisis

Much has been written about the California electricity crisis; my purpose here is not to repeat that discussion. Instead, my focus is on what the crisis did to the electric utilities involved, how Congress responded, and how FERC reacted to legislative actions.

Dimensions of the Crisis

Nationally, the nominal average retail rate of electricity increased by slightly more than 2.5% between the end of 1999 and the end of 2000, and the real average retail rate of electricity increased by less than half of a percent (Table 4; U.S. Energy Information Administration, 2012). Neither retail rate figures suggested there might be a serious problem with electric utilities

¹⁷⁶ FERC shifted from encouraging ISOs to promoting RTOs because it found that for transmission access to be sufficient greater regional scope was required. RTOs cover large regions of the country, providing the additional geographic scope that the Commission believed was necessary for better pricing (Federal Energy Regulatory Commission, 1999, p. 4).

¹⁷⁷ As their terms expired Chairwoman Elizabeth Moler was replaced in 1997 by Chairman James Hoecker, and Commissioner Santa left the same year (Federal Energy Regulatory Commission, 2013b, 2013c).

somewhere in the country; nor did the modest deterioration in the average national debt-to-equity ratios for major investor-owned electric utilities over the same period (Table 28; U.S. Energy Information Administration, 2002, p. 35). Comparing the net operating incomes for private electric utilities over the same years, however, shows a decline of \$8.958 billion (Table 29; U.S. Energy Information Administration, 2011, p. 68).

Closer examination reveals that much of that decline and thus much of the problem was in California. To get a sense of just how dramatic the crisis was to the bottom-lines of the electric utilities involved, one needs only to examine their debt-to-equity ratios and net operating incomes between 1999 and 2000.

In 1999 Pacific Gas and Electric Company (PG&E) had a debt-to-equity ratio of 58.5/41.5 and a net operating income of just over \$1.18 billion; by the end of 2000 its ratio had deteriorated to 83.6/16.4, and its net operating income was roughly -\$3.066 billion (Table 32; Pacific Gas and Electric Company, 2000, pp. 112, 114; 2001, pp. 112, 114). Over the same period, Southern California Edison Company (SOCAL) saw its debt-to-equity ratios decline from 66.1/33.9 in 1999 to 89.5/10.5 in 2000, and its net operating income went from \$859.46 million in 1999 to about -\$1.653 billion in 2000 (Table 32; Southern California Edison Company, 2000, pp. 112, 114; 2001, pp. 112, 114). At the same time, San Diego Gas and Electric Company's (SDG&E) debt-to-equity ratio went from 44.2/55.8 in 1999 to 47.8/52.2 in 2000, and its net operating income went from \$281 million in 1999 to \$233.7 million in 2000 (Table 32; San Diego Gas and Electric Company, 2000, pp. 112, 114; 2001, pp. 112, 114). Moreover, even with capped retail electricity rates, consumers in the state experienced more than an eight percent increase from the end of 1999 to the end of 2000 (Table 31; U.S. Energy Information Administration, 2013c).¹⁷⁸

It was apparent that something had gone terribly wrong in California; the question was what. As had happened in the Midwest prior to the spike in wholesale electricity prices in the summer of 1998, California experienced unseasonably hot temperatures in 2000, driving up consumer demand for electricity for air conditioning and refrigeration (Joskow, 2001, p. 378). At the time California relied upon hydroelectric power plants in the Northwest to provide much of its power; demand for electricity was increasing in other states as well due to the higher

¹⁷⁸ Only mean nominal retail electricity rates (rates actually paid) are available for California for the period 1999 to 2006.

temperatures (Joskow, 2001, p. 378; Wolak, 2005, pp. 158-159). Higher temperatures also created more evaporation, so the hydroelectric plants had less water to work with, and they could not produce as much electricity (Joskow, 2001, p. 378; Wolak, 2005, p. 158). With wholesale demand for electricity increasing and the supply from hydroelectric facilities decreasing, prices increased.

Meanwhile, under the terms of the state's transition to wholesale electricity markets PG&E, SDG&E, and SOCAL were required to divest their fossil fuel generation facilities, eliminating the best and cheapest alternative for electricity. The only other option for the utilities was to purchase electricity from wholesale marketers in the spot and day-ahead wholesale electricity markets. Wholesale marketing firms like ENRON knew the California utilities were vulnerable and used fraud and other illegal techniques to earn as much money as possible, driving wholesale electricity prices even higher (Joskow, 2005a, p. 32). Because retail prices were capped for PG&E and SOCAL, the utilities were placed in a severe price squeeze as they paid more for electricity sold at wholesale than they could charge at retail (Joskow, 2001, pp. 365-366). Ultimately, these tactics drove PG&E to declare bankruptcy, which SOCAL considered but ultimately did not (pp. 365-366). SDG&E was better able to weather the financial storm, as its debt-to-equity ratios reflect (Table 32), in part because it was in better condition from the start than the other utilities.¹⁷⁹ Additionally, at least until the state legislature stepped in, SDG&E had the ability to raise its retail rates as wholesale rates increased, passing the increases on to retail consumers through higher retail rates (p. 365).

Federal Reaction to Market Restructuring Problems

In the conceptual framework, I hypothesize that Congress will only react to a crisis or a perceived crisis if it is of a particular type, size, and scope. Problems with market restructuring, particularly in its most extreme form in California, was a regulatory crisis. The regulatory crisis occurred because of the blurring regulatory boundaries between state and federal regulation and how regulators chose to deal with the resulting inconsistencies. As Commissioner Vicky Bailey testified, blurry regulatory boundaries had to be addressed through the use of comity, with regulators communicating effectively across levels of government and exercising deference when they saw a matter that they believed was outside of their regulatory jurisdiction (U.S.

¹⁷⁹ Although SDG&E publicly considered bankruptcy, like SOCAL it decided not to declare it (Joskow, 2001, pp. 365-366; Wolak, 2005, pp. 146-147).

Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 1994a, p. 179). If comity did not work, then Congress would have to enact legislation clarifying which level of government had the authority to regulate certain activities by electric utilities in restructured markets (p. 179). One will see in the federal response to the California crisis an outright failure of comity.

Whether the crisis represented a constituency crisis is a more difficult question to answer. In California, for example, retail consumers of electricity from PG&E and SOCAL were shielded from the effects of the crisis because of retail price caps; whether they would have suffered any ill effects if the utilities had gone completely out-of-business is unknown as other entities likely would have emerged to provide electricity. Even so, retail consumers of electricity from SDG&E clearly were affected due to the initial absence of retail price caps, so for them it was a constituency crisis. Perhaps to a limited degree, then, this was a mild constituency crisis as most appeared shielded from the problems.

Most congressional constituents were protected from these problems for another reason; the size of the crisis. The California electricity crisis was limited initially to just the state; over time it did become more of a regional problem, but it still did not impact the entire country. Similarly, in the Midwest price spike case only those in a handful of Midwestern states experienced difficulties. Moreover, only the 22 states that had transitioned to wholesale markets potentially could have this kind of a problem, further limiting the number of users that such a crisis could affect.

Finally, in terms of scope the Midwest price spike lasted only one week in 1998, which is not enough time for demands for action from Congress. The California crisis began in earnest in the spring of 2000, providing little time for constituents to demand a congressional response by the end of the year (Joskow, 2001, p. 377; Wolak, 2005, p. 145).

Taken together, the type, size, and scope of the crisis in California related to electric market restructuring suggest the absence of a large enough and deep enough national problem to push Congress to act. Instead, one would expect that legislators would respond by introducing legislation that would not pass, and by holding hearings where they fixed blame on either FERC, the states, or both.

Congressional Response 2000. By 2000 it was abundantly clear, not only in Washington, D.C. but also throughout the country, that there were significant problems with wholesale electricity

markets. Indeed, no state passed legislation after 2000 to restructure after the California electricity crisis became well known (see Table 6; U.S. Energy Information Administration, 2010; Joskow, 2005a, p. 32). Members of Congress introduced 25 amendments, bills, and resolutions in 2000 in response to the problems that directly referenced the Federal Energy Regulatory Commission (see Tables 16 and 17; Thomas, 2013t). Eleven addressed the problems in wholesale markets and eight of these specifically focused on the California electricity crisis (Thomas, 2013t). It is worth examining in greater detail what the 11 amendments, bills, and resolutions would have done if they had been adopted.

H.R. 5131 [introduced by Representative Bob Filner (D-CA)] and S. 3093 [introduced by Senator Barbara Boxer (D-CA)] would have required FERC to impose wholesale price caps in California, mandated refunds to those who overpaid for wholesale services, and established civil legal penalties; the bills remained in subcommittee and committee in their respective chambers (Congressional Research Service, 2013u, 2013y). In the meantime, H.R. 5457 [introduced by Representative Brian Bilbray (R-CA)] sought to provide rate relief by encouraging more distributed electricity generation, and H.R. 5458 [which Bilbray also introduced] attempted to lower wholesale rates in California even further by allowing utilities to purchase electricity from the Bonneville Power Administration at a price to be determined by FERC; both bills remained in subcommittee (Congressional Research Service, 2013v, 2013w). Next, H.R. 5626 [introduced by Representative Filner] would have granted FERC additional authority to order refunds in California for excessive wholesale rates; the bill also remained in subcommittee (Thomas, 2013t). Similarly, H.Con.Res.417 [introduced by Representative Duncan Hunter (R-CA)] would have expressed the sense of Congress that FERC needed to act immediately to address the problem of excessive wholesale rates in California; the resolution also remained in subcommittee (Thomas, 2013t). The House did pass H.Res.650 [introduced by Representative Bilbray], stating that FERC should release to the public the results of its investigation into the California electricity crisis (Congressional Research Service, 2013x). Finally, Senator Boxer added an amendment [S.AMDT.4100] to a budget bill [H.R. 4733] that would have required FERC to report to Congress on the status of the crisis; President Clinton, however, vetoed the budget bill to which it was attached (Thomas, 2013t).

Without a doubt the crisis had caught the attention of legislators from California, but they were unable to pass any meaningful legislation to address it. At the same time, H.R. 5559

[introduced by Representative Anthony Weiner (D-NY)] sought to deal with wholesale price spike problems in New York, while S. 2098 [introduced by Senator Frank Murkowski (R-AK)] and S. 2886 [introduced by Senator Phil Gramm (R-TX)] were designed to further clarify and amend elements of market restructuring. None of the bills passed (Thomas, 2013t).

As Congress wrestled with problems associated with wholesale competition, it appropriated \$175.2 million for FERC in FY 2001 (Table 15), an increase of a little more than a tenth of a percent from the previous year (P.L. 106-377; 114 Stat. 1441A-78). Hearings provide a better sense whether the small funding increase had anything to do with FERC's handling of the problems associated with wholesale competition. The Senate Committee on Energy and Natural Resources held hearings in April 2000, just prior to the California electricity crisis outbreak, to examine what should be done legislatively to address the problems associated with the wholesale market transition (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2000).

Committee Chair Frank Murkowski (R-AK) in his opening remarks addressed a number of FERC's failures to address known problems with the electric utility system and its regulation (p. 160). Those failures included the lack of incentives for utilities to build new transmission systems to keep up with growing electricity demand, and transmission rate problems that tended to discourage utilities from joining independent system operators because when they did their transmission rates went down (as happened in California, p. 160). In this view, FERC encouraged utilities to join either independent system operators or regional transmission organizations for pricing and reliability purposes,¹⁸⁰ but essentially punished the utilities when they did so with lower transmission rates. Clearly, the Senator was not happy with FERC's performance, particularly on matters that directly related to market competition.

In the same hearings, Senator Jeff Bingaman (D-NM) went back to the subject of the legislation the Senate was considering related to competition. He said by considering the proposed legislation Senators had to decide whether to give FERC more authority to regulate "bundled retail transmission," to compel utilities to join regional transmission organizations, "to enforce mandatory reliability standards," and to punish excessive uses of market power by

¹⁸⁰ Reliability of the grid is linked directly with building new transmission facilities to replace older systems that are deteriorating and to increase capacity with more lines than existed in the past to cope with increasing electricity demand.

market participants (p. 161). Moreover, Senator Ben Knight Horse Campbell (R-CO) indicated that the federal government was playing catch up, attempting to determine the federal government's role in regulating retail competition as some states were already implementing it. Campbell expressed concern about grid reliability and affordable electricity as markets grew (p. 162).

While senators seemed concerned with FERC's performance and market changes, FERC Commissioners testified about the need for federal legislation to untangle the confusion over how the electric utility industry and regulators should move forward as a result of competition. Commission Chair James Hoecker saw the debate among policy makers as being not over whether market restructuring should occur, but over how and at what pace (pp. 164-165). Hoecker argued that successful legislation dealing with market competition issues would have to provide for consistent "coordinated management of the grid" and regulate power generation and transmission differently (p. 165). Additionally, he stressed that all transmission facilities should be subject to the same access rules; FERC's authority to encourage RTOs should be expanded; mandatory reliability rules had to be established and enforced by some yet-to-be-named third party with the Agency serving as a regulatory backstop; and the Commission needed more authority to punish excessive market power (p. 165). Finally, Hoecker indicated that FERC's interest was limited to wholesale competition, while the states maintained interest in the regulation of retail markets (pp. 165-166).

Overall, Commissioners largely reinforced what the Chair had said. They also noted several other items. Commissioner Linda Breathitt testified that RTOs were important because they provided a remedy for transmission discrimination and other anti-competitive behavior (p. 178). Commissioner William Massey added that all transmission activities should be regulated by rules FERC established, and the Commission should regulate transmission siting to overcome siting opposition (p. 184). Piggybacking on the last point, Commissioner Curt Hebert in the question-and-answer period said that when environmental impact was considered along with energy needs, environmental concerns won making it nearly impossible to site any energy project (pp. 196-197). In his view, siting was made even more difficult because of the use of price caps, like those in California, which made facilities unattractive economically (p. 202). According to Chairman Hoecker, the inability to site new facilities in the states contributed significantly to the summer power shortage problem as demand for electricity overwhelmed the

available supply, and the Commission was forced to rely upon RTOs to address the shortage problem by maximizing transmission interconnection in a region (pp. 201-202).

In another hearing, the House Subcommittee on Energy and Power examined the California electricity crisis (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 2001). Chairman Hoecker testified that the electricity market in California had clearly failed as it was uncompetitive in meeting summer demand in 2000, and wholesalers demanded literally confiscatory rates from utilities in the state (p. 104). To address the matter FERC allowed the California Independent System Operators (CAISO) to impose wholesale price caps, and Hoecker promised that the Agency would conduct an investigation of what happened (p. 104). At the same time, Commissioner Breathitt indicated that FERC was conducting a hearing following a complaint by SDG&E that it had been charged excessive wholesale rates; if the Agency found the rates to be unreasonable it could order a refund (p. 111). According to Commissioner Hebert, the failure of the California electricity market was due to regulatory policies that discouraged the construction of power plants and transmission lines, policies that had to be changed to prevent similar failures in the future (p. 115). Commissioner Massey added that part of the reason for the California crisis was a lack of generation capacity in the state, creating a reliance on more expensive out-of-state sources (p. 122). Furthermore, Massey said that for the wholesale changes to succeed, states like California needed to site new facilities (p. 123).

FERC Reacts to the California Electricity Crisis and Congress

Just as Congress was trying to get up to speed on changes in the electric utility industry, the California electricity crisis began in earnest. Legislators reacted as they typically do by holding hearings as members most affected by the crisis from the state of California introduced a series of bills to address the subject in 2000. What began as a statewide crisis in mid-2000 affected electricity rates “throughout the western U.S.” (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 2001, p. 123). Even so, Congress did not respond immediately. Moreover, it was unclear what kind of a legislative approach might solve the problem.

Part of the problem in California may have resulted from how FERC exercised its authority as the state altered its electricity markets. Consistent with Commissioner Bailey’s testimony in chapter 6, FERC exercised comity as government officials in California put together

the new market design; Commission staffers deferred to the choices being made in California even though many were uneasy about some of those choices (Joskow, 2001, p. 374).

Nonetheless, over time FERC staff members became more vocal in their opposition to certain elements of the California market design, and the Commission began to reject some proposals (p. 374). As FERC began to challenge the decisions of the state public utility commission and the independent system operators, the relationships necessary for regulation to succeed in the restructured system began to fray (p. 375). Commissioners Hebert and Massey laid much of the blame for the California market failure at the feet of California government officials, while local and state officials blamed FERC (U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power, 2001).

By 2000, FERC's docket was bursting with cases involving wholesale market transitions, the California electricity crisis, and more traditional transmission and wholesale rate questions. The Agency issued eight orders (Tables 19 and 20) and eight opinions (Tables 21 and 22) in response.¹⁸¹ Overall, in 2000 FERC issued 1,734 formal decisions (Tables 24-27), of which over 58% had electric utility-related prefixes. Of the latter, more than 13% dealt with mergers and acquisitions (prefix EC), 35% involved rate decisions (ER), a little more than 25% related to those applying for exempt wholesale generator status (EG), and almost 8.5% pertained to parties that had filed a complaint with FERC (EL); the issuance of securities or the assumption of debt made up about 5% of the decisions (ES). Another 8.5% of the electric utility docket involved mixed prefix cases, suggesting that the Commission may have consolidated cases to save time and money. Meanwhile, the Commission itself resolved 54% of the formal electric utility decisions, the office directors 41.5%, and the administrative law judges 4.5%.

When comparing FERC's formal docket from 1994, the last year covered in chapter 6, with 2000, the percentage of the total number of docketed decisions that could be attributed to electric utilities grew from a little more than 25% to almost 58.5%. This occurred as the total number of electric utility decisions nearly doubled, while the overall total declined by 23%.

¹⁸¹ Of the eight orders, three were administrative, two related to implementation of the Energy Policy Act of 1992, one regarded accounting and financial reporting, one involved fees and charges, and one revised the information requested in forms. Four opinions involved transmission issues; one of which involved a California utility, two opinions involved cases relating to wholesale rates and the cost of decommissioning nuclear power plants, one was a complaint filed against wholesale rates charged to a utility in California, and one dealt with a proposed merger.

Perhaps this growth in the number of electric utility-related decisions could be attributed to the market transition; however, restructuring began in 1993 after the passage of the Energy Policy Act in 1992. The growth in such cases probably reflects both the expanding number of states establishing wholesale markets and problems associated with competition such as the Midwest price spike and the California electricity crisis.

One way to confirm that this switch in wholesale market structure by some states added to FERC's formal docket is by looking at the new decision types in 2000. For example, the Commission had to decide 10 cases with the prefix OA, "open access transmission tariffs" (Federal Energy Regulatory Commission, 2011). The Energy Policy Act and Order Number 888 had required utilities to provide open transmission access so that wholesale wheeling could occur; OA cases were unambiguously related to transitioning markets. FERC also decided three cases with the prefix SC, stranded costs (Federal Energy Regulatory Commission, 2011). Finally, the Agency considered a case with prefix TX, related to the conditions under which the transmission of electricity could result, including wholesale wheeling cases, under section 211 of the Federal Power Act after it was amended by the EPAct (Federal Energy Regulatory Commission, 2011).

FERC had predicted the impact of the regulatory and industry changes to promote wholesale competition on its operations, as the Commission had forecast a significant increase in the number of rate and merger and acquisition decisions due to market changes (Federal Energy Regulatory Commission, 1997, p. 5). When one compares 1994 to 2000 the number of rate (ER) decisions grew by 142%, and the number of merger and acquisition (EC) decisions rose 249%.

Docket growth also might have happened for other reasons. One would expect to see the number of complaints (EL) filed to rise in response to the Midwest price spike and the California crisis. Compared with 1994, the Commission issued 39% more EL decisions in 2000. The number of stand-alone generators applying for exempt wholesale generator status should have grown as well as a result of the bifurcation of the electric utility industry in states with competition; perhaps this is why the number of decisions with an EG prefix grew by 97% from 1994 to 2000. Lastly, due to the Midwest price spike and the California electricity crisis one would expect to see the number of utilities issuing securities or assuming more debt (ES decisions) to increase as they coped with higher wholesale electricity rates. As anticipated, between 1994 and 2000, the number of ES decisions increased 39.5%.

Summary

Although some legislators recognized and began to respond to problems associated with wholesale markets in the late 1990s, the California crisis began to drive even more activity in the form of more bills and hearings in 2000. Unfortunately, due to the characteristics of the crisis and gridlock it still would be a number of years before a legislative response would be crafted and passed to address many of these problems. In the meantime, utilities, consumers, and regulators would suffer from the related difficulties, and pressure would continue to mount for a congressional response. As all of this was occurring another national election brought more changes in its wake.

Political Change and Crisis Response

Congress Reacts after the 2000 Election

As FERC took the primary federal role in responding to the wholesale market transition and the California electricity crisis, the 2000 election brought some important changes that had ramifications for how the Commission dealt with many of these issues. Republican George W. Bush was elected President, the House of Representatives remained under Republican control, and the Senate saw partisan control of the chamber bounce back-and-forth between the two parties over the next two years (U.S. Congress. Senate, 2013).

Not surprisingly, the financial condition of electric utilities reflected many of the problems arising in part from wholesale markets. Between the end of 2000 and the end of 2001, the average national nominal retail rate of electricity increased by seven percent, and the average national real retail rate of electricity increased by slightly more than four and a half percent (Table 4; U.S. Energy Information Administration, 2012). Before the transition to wholesale markets began, real retail rates had been declining since 1983, and they had remained nearly flat with modest nominal increases. In 2001, total net operating incomes for all major investor-owned electric utilities rebounded to roughly \$32.37 billion, nearly its 1999 level, before the California electricity crisis began in mid-2000 (Table 29; U.S. Energy Information Administration, 2011, p. 68). Additionally, among all utilities with bond ratings from Standard & Poor's, a little over 40% had ratings of A- or better (McDermott, 2012, p. 20); prior to restructuring between 1984 and 1995 (Table 30) between 60 and 67 percent maintained such

ratings (U.S. Energy Information Administration, 1988, p. 1060; 1991, p. 590; 1996b, p. 555).¹⁸² The average financial condition for electric utilities nationally had been stable and improving modestly every year between the mid-1980's and the mid-1990's, but a serious financial decline began for utilities as the transition to wholesale competition started in some states.

Nowhere was this decline more noticeable than among the utilities in California. Between the end of the year 2000 and the end of 2001, the average nominal retail price of electricity in the state had increased by almost 18.5% (Table 31; U.S. Energy Information Administration, 2013c). Even retail price caps did not preclude utilities from asking the state public utility commission for rate increases. Rather than push utilities into further decline, the state commission chose to permit higher retail rates. PG&E saw improvement in its debt-to-equity ratio (from 83.6/16.4 in 2000 to 73.2/26.8 in 2001), and its net operating income improved (from -\$3.066 billion in 2000 to just over \$1.7 billion in 2001), perhaps helped in part by declaring bankruptcy earlier in 2001 (Table 32; Pacific Gas and Electric Company, 2001, pp. 112, 114; 2002, pp. 112, 114; Joskow, 2001, p. 366). Similarly, SOCAL saw its debt-to-equity ratio improve (from 89.5/10.5 in 2000 to 66.8/ 33.2 in 2001), and its net operating income (it rose from -\$1.653 billion in 2000 to a little over \$2.997 billion in 2001) (Southern California Edison Company, 2001, pp. 112, 114; 2002, pp. 112, 114). As one would expect, operating under its first full year of retail price caps SDG&E saw its debt-to-equity ratio deteriorate (from 47.8/52.2 in 2000 to 48.7/51.3 in 2001), and its net operating income also declined (from a little over \$233.7 million in 2000 to slightly more than \$218 million in 2001) (San Diego Gas & Electric Company, 2001, pp. 112, 114; 2002, pp. 112, 114).

Members of Congress responded to these challenges as one would expect, by introducing numerous bills in 2001. Sixty-two bills referred to the “Federal Energy Regulatory Commission,” 18 of which addressed high electricity rates in the western U.S. caused by the transition to wholesale competition (Tables 16 and 17; Thomas, 2013u).¹⁸³ California

¹⁸² Unfortunately, the U.S. Energy Information Administration stopped aggregating the data necessary to produce the debt-to-equity ratios for major investor-owned electric utilities in 2000; as a result the ratios end in 2000. See Table 28.

¹⁸³ Twelve of the bills addressing high rates were introduced by members in the House, including H.R. 238, H.R. 264, H.R. 268, H.R. 381, H.R. 971, H.R. 1468, H.R. 1647, H.R. 1941, H.R. 1974, H.R. 2274, H.R. 2331, and H.R. 2757; all of the House bills remained either in subcommittee or committee (Thomas, 2013u). Six of the rate bills were introduced in the

representatives introduced 12 of the rate bills, while the members from Oregon and Washington state were responsible for three others; none passed (Thomas, 2013u). Meanwhile, 11 other if enacted would have given constituents more alternative energy options both for environmental reasons and to allow them to avoid high electricity prices; these bills remained in committee or subcommittee (Thomas, 2013u).¹⁸⁴ Legislators also introduced six bills promoting comprehensive energy reform to address failures of restructuring and other energy challenges; two died in conference and the rest remained in committee (Thomas, 2013u).¹⁸⁵ Finally, four bills sought to improve transmission reliability; all remained in committee or subcommittee (Thomas, 2013u).¹⁸⁶

Congress may not have adopted any of the proposed legislation in part due to the terrorist attacks of September 11, 2001, as more pressing issues arose. It did, however, pass an appropriations bill that included nearly \$184.16 million for FERC in fiscal 2002, about a five percent increase (Table 15; P.L. 107-66; 115 Stat. 508).

Throughout 2001 committees and subcommittees held numerous hearings on electric utilities, the transition to wholesale markets, and FERC. In one hearing before the Senate Committee on Energy and Natural Resources, the Committee examined legislation that would have imposed wholesale price caps throughout the western U.S. in response to the California electricity crisis (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2001a). Committee Chair Frank Murkowski (R-AK) opened the hearing by stating that the wholesale price controls the legislation proposed would discourage the development of new generation and transmission facilities in California (p. 4). He went on to argue that the only way that the state could get out of its electricity crisis was to build new generation and transmission facilities, the

Senate, including S. 26, S. 80, S. 287, S. 552, S. 764, and S. 1068; all of the Senate bills remained in committee (Thomas, 2013u). See Table 16.

¹⁸⁴ The alternative energy bills included H.R. 269, H.R. 954, H.R. 1045, H.R. 1075, H.R. 1945, H.R. 2184, H.R. 2233, H.R. 2587, H.R. 3089, S. 933, and S. 1403 (Thomas, 2013u).

¹⁸⁵ The six bills that involved comprehensive energy reform included H.R. 4, H.R. 3406, S. 388, S. 389, S. 597, and S. 1766; H.R. 4 and S. 1766 died in a conference committee (Thomas, 2013u).

¹⁸⁶ The four transmission reliability bills were H.R. 312, H.R. 2814, S. 172, and S. 1231 (Thomas, 2013u).

lack of which had contributed to the crisis, generally agreeing with the Bush administration (p. 4). At the same time, Senator Jeff Bingaman (D-NM) stated that FERC had found in November 2000 that wholesale rates in California were unreasonable; under the Federal Power Act the Commission was required to set a reasonable wholesale price, effectively establishing a cap (pp. 5-6).

These remarks highlighted some of the reasons why legislation was not adopted to address the California electricity crisis. Disagreement arose between those who believed that the crisis should be resolved by increasing the supply of electricity and those who believed that the federal government should step in and impose wholesale price caps. FERC Chairman Curt Hebert testified in agreement with the Bush administration that price caps should be avoided; instead efforts should focus on increasing supply, diminishing demand, and developing a regional transmission organization that could better coordinate transmission activities throughout the western states (p. 48). According to Hebert, FERC also needed to investigate cases where utilities had been charged excessive rates, and the Agency could authorize refunds for overcharges where appropriate (pp. 48-49).

Another reason why Congress did not act in response to the California electricity crisis was revealed in hearings before the House Subcommittee on Energy and Air Quality. In their opening remarks, both subcommittee Chair Joe Barton (R-TX) and the Ranking Member, Representative Rick Boucher (D-VA), commented that before legislation was adopted legislators needed to be certain it would make the situation better (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Air Quality, 2001, pp. 3-4). Both Barton and Boucher underscored the complexity of the problem and the difficulty of knowing with any certainty what might be done to solve it rather than make it worse.

This uncertainty also was reflected in FERC Commissioners' testimony at the same hearing. Commission Chair Hebert noted that price caps would result in diminished electricity supplies in California and would make the crisis worse (pp. 22-23). Commissioner William Massey testified that although he supported establishing electricity markets, he believed that FERC had to impose price caps for a limited time on wholesale generators who sold electricity in the real-time and day-ahead electricity markets or California would be financially ruined by the resulting wholesale rates (p. 40).

Moreover, the hearing highlighted that FERC's authority to address a crisis like the one in California was limited. Barton's opening remarks commented on these limitations, stating that the Commission only had regulatory jurisdiction over about half of the wholesale transactions in the western U.S.; siting for new facilities was totally up to the states (p. 2). Chairman Hebert testified that the Commission had limited rate jurisdiction over federal power marketing agencies, and it had no regulatory jurisdiction over public power systems, co-ops, or municipal run utilities (p. 52). He indicated that evidence suggested that in California private companies, municipal utilities, and co-ops had all engaged in wholesale price manipulation to the detriment of the state's private utilities and consumers (p. 72). For his part, Representative Boucher acknowledged that FERC had limited regulatory jurisdiction and suggested that Congress might consider expanding FERC's authority so it could address the crisis adequately (p. 4).

At a joint hearing before the House Subcommittee on Energy Policy, Natural Resources, and Regulatory Affairs and the Committee on Government Reform, FERC's General Counsel Kevin Madden listed the Agency's responses to the crisis (U.S. Congress. House. Committee on Government Reform, 2002). The Commission was investigating wholesale prices and issuing refunds when it was appropriate; it adopted an order to expand the supply of energy and reduce demand; and it provided waivers to qualifying facilities operating under PURPA so they could produce more energy than they were normally allowed to under the law (p. 40). Additionally, FERC encouraged hydroelectric licensees to generate more electricity if they could; the Commission examined whether to put transmission rates online; and the Agency was organizing a conference with all of the western states to see what else might be done (p. 40).¹⁸⁷

FERC Reacts to Political Change, Congress, and Crisis in 2001

Throughout 2001, FERC dealt with political change, congressional actions, and the California electricity crisis. The election of President George W. Bush resulted in the appointment and confirmation of two new commissioners, Patrick Wood III and Nora Brownell, and four different commission chairs including James Hoecker, who left the Agency in January; James Massey from January 19 to January 21; Curtis Hebert, who left the Agency in August; and

¹⁸⁷ Congressional and regulatory attempts to resolve the crisis were complicated further as governors from nine western states signed a letter explicitly stating their opposition to wholesale price controls (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2001b, p. 4).

Patrick Wood III (Federal Energy Regulatory Commission, 2013b; 2013c). The changes in leadership could not have helped at a time when FERC sought to cope with its normal regulatory workload plus the problems associated with the California electricity crisis. Complicating matters further, Congress had not addressed the crisis legislatively. Debate also took place among the Commissioners over whether wholesale price caps should be imposed temporarily until wholesale markets could be fixed in the western U.S. Finally, the Agency was hamstrung further because it had limited regulatory authority to resolve the crisis, and elected officials in the affected states could not agree on the optimal approach.

While uncertainty seemed to swirl around the Commission, three states -- California, Nevada, and New Mexico -- suspended market restructuring in 2001 (U.S. Energy Information Administration, 2010). The states replaced it with a regulatory approach similar to what they had before they chose to establish wholesale competition. In a nod perhaps to the professionalism of FERC, the Commission still managed to issue roughly 75 orders between August 2000 and July 2001 to address the California electricity crisis (Federal Energy Regulatory Commission, 2002m, p. 5).¹⁸⁸ Among the orders were provisions designed to mostly remove California utilities from the real-time and day-ahead wholesale electricity markets into less expensive and more stable long-term electricity contracts with generators (Federal Energy Regulatory Commission, 2002m, p. 4; Wolak, 2005, pp. 171-174). FERC also issued an order that placed a cap throughout the western interconnection on the wholesale price of electricity sold in the real-time and day-ahead wholesale markets, and it required wholesale marketers to bid (U.S. Congress. Senate. Committee on Governmental Affairs, 2001, pp. 135-137; Federal Energy Regulatory Commission, 2002m, p. 4; Joskow, 2001, p. 384; Wolak, 2005, p. 173). Ultimately, these actions and those taken by the state of California and the California Independent System Operators (CAISO) resolved the crisis (Joskow, 2001, pp. 383-386; Wolak, 2005, pp. 171-174). The resolution, however, came at a great cost as FERC's reputation with the states and with Congress had been badly damaged,¹⁸⁹ utilities suffered severe financial hardships

¹⁸⁸ These orders were specific to the western interconnection (the western states whose electric transmission systems are interconnected) including California and are not included in the orders listed in the appendix. Instead, the orders are counted among the docketed decisions.

¹⁸⁹ The states and Congress believed that the Commission acted too slowly in response to the California electricity crisis and failed to take actions that could have prevented the crisis from

from problems associated with the transition to wholesale markets, and great hostility developed in many states and among the general public to the concept of wholesale electricity competition (Joskow, 2005a, p. 32).

FERC's formal docket exhibited the effects of its preoccupation with the need to resolve the California electricity crisis as quickly as possible. In 2001 this meant that the Agency issued only two industry-wide orders related to electric utilities (Tables 19 and 20) and four opinions (Tables 21 and 22). One order was administrative in nature and the other allowed for the electronic filing of a form; two opinions dealt with transmission-related issues, one involved questions about wholesale rates in a contract, and one regarded the status of an application form filed with the Midwest Independent System Operators (MISO) (Table 22).

Overall, however, the Commission's total formal docket rose by 20% from the previous year, with much of the increase coming from electric utility-related decisions. The percentage of total decisions made up by cases involving electric utilities was 60.4%, a two percent increase from 2000. In 2001, as one would expect due to the crisis, about one-third (36%) of the electricity decisions were (ER) rate cases, 10.4% were (EL) formal filings by entities challenging actions taken by others, and four percent involved the issuance of securities or the assumption of debt (ES), perhaps in some cases by utilities experiencing financial difficulties as a result of the crisis. Meanwhile, it would appear that wholesale competition in states that did not abandon it continued to encourage stand-alone generators to apply for exempt wholesale generator status (EG), making up roughly 25.5% of the electricity decisions, and to inspire more mergers, sales, and acquisitions (EC), composing more than 10% of such decisions. Market restructuring also was likely responsible for the decisions associated with (RT) transmission rate filings (1.67%) and examining (OA) tariffs for transmission access (1.11%) (Federal Energy Regulatory Commission, 2011). Finally, possibly to expedite some of its decision making, FERC issued a little over seven percent of its decisions with multiple mixed docket prefixes. The Commission handled more than half of the decisions (54.57%) itself, with office directors making 39.86%, and ALJs 5.57%.

occurring in the first place. Whether these criticisms were completely fair is a separate question as some of this criticism may have been a product of blame shifting consistent with operating room politics.

Although the Agency clearly began to respond to the crisis through its formal docket in late 2000, it is useful to compare 2000 to 2001 to see how much more active the Commission was in 2001. As already mentioned, in terms of both percentage and total number, electricity decisions increased in 2001. Moreover, the number of ER rate cases increased by slightly more than 28% over the same period, EL filings rose by more than 52%, and debt and security cases (ES) actually declined by nearly four percent. This decline might suggest that the financial condition of utilities affected by the crisis or by the transition to wholesale competition might have been stabilizing, at least temporarily. Affected perhaps by states that began to suspend competition; the number of decisions pertaining to EC acquisitions, mergers, and sales declined by 5.9%. Stand-alone wholesale generators seemed undeterred by the states choosing to suspend wholesale market development, and the number of decisions related to EG exempt wholesale generator status increased by slightly more than 26%. Crisis response also seemed to shift more of the work toward the ALJs: their decision workload increased by 52% from 2000; the Commission's increased by 25% and office directors by 19%.

Crisis Ebbs

Congressional Response in 2002

By the start of 2002 the crisis had mostly ended (Joskow, 2001, p. 386; Wolak, 2005, p. 174), but it would take years for FERC to earn back much of the trust it had lost with Congress. In the meantime, consistent with the end of the crisis, the average national nominal retail rate of electricity declined by a little over one percent from the end of 2001 until the end of 2002, while the average national real retail rate declined by nearly three percent (U.S. Energy Information Administration, 2012). Signaling persistent financial weakness among utilities in response not only to the crisis but also to the transition to wholesale competition more generally, net utility operating incomes fell in 2002 to \$30.548 billion, a decline of nearly 5.6% from the previous year (Table 29; U.S. Energy Information Administration, 2011, p. 68).

California utilities saw some improvements as well, likely encouraged further by the decision to end the state's experiment with wholesale competition. Although average retail rates did increase in the state in 2002, the rise was a more modest increase of 8.65% (compared to 18% in 2001) (Table 31; U.S. Energy Information Administration, 2013c). Pacific Gas and Electric Company had its debt-to-equity ratios improve (from 73.2/26.8 in 2001 to 58.8/41.2 in 2002), and its net operating income rose from \$1.708 billion to \$2.595 billion (Pacific Gas and

Electric Company, 2003, pp. 112, 114). San Diego Gas & Electric Company had its debt-to-equity ratios improved from 48.7/51.3 to 46.5/53.5, and its net operating income increased from \$218.05 million to \$260.93 million (San Diego Gas & Electric Company, 2003, pp. 112, 114). Lastly, Southern California Edison Company's debt-to-equity ratios improved from 66.8/33.2 to 59.7/40.3; however, its net operating income declined from \$2.998 billion to \$1.486 billion (Southern California Edison Company, 2003, pp. 112, 114).¹⁹⁰

In 2002, members of Congress responded to the end of the crisis by introducing 19 bills (Tables 16-17) referencing FERC; included were six bills and one Senate amendment that specifically addressed either financial or legal matters related to the end of the crisis or issues linked to market restructuring more generally (Thomas, 2014a).¹⁹¹ All of the bills remained either in committee or subcommittee, and the Senate amendment died in conference committee (Thomas, 2014a).

Although there seemed to be some interest in expanding FERC's authority to regulate more energy activities, the true test of how much faith Congress had in the Agency after the crisis was revealed in appropriations and congressional hearings. First, FERC had to wait until early 2003 before finding out that its FY 2003 appropriation was \$192 million, about a four percent increase over 2002 (Table 15; P.L. 108-7; 117 Stat. 153).

Next, legislators made it clear in hearings that they still were not completely happy with the Agency. In one hearing before the House Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, at least one member seemed pleased with FERC's actions in

¹⁹⁰ Although SOCAL's net operating income declined, this may not have been a uniformly bad thing, as it would appear from the company's balance sheet that it may have used some of that money to purchase back some of its preferred stock, lowering its debt (Southern California Edison Company, 2003, p. 112).

¹⁹¹ The six bills included H.R. 3952 [introduced by Representative Peter DeFazio (D-OR)] to provide consumer advocates in federal legal proceedings to electricity consumers, H.R. 5245 [introduced by Representative Darrell Issa (R-CA)] to reform the electricity markets in the western states, H.R. 5614 [introduced by Representative John Dingell (D-MI)] to prevent and punish fraud occurring in energy markets, S. 1951 [introduced by Senator Dianne Feinstein (D-CA)] to create more oversight for energy trading activities, S. 2716 [introduced by Senator Feinstein] to give FERC more authority to investigate and to punish violations of federal energy law, and S. 2724 [introduced by Senator Feinstein] to provide for more regulatory oversight for energy traders (Thomas, 2014a). Senator Max Baucus (D-MT) also introduced, S.AMDT.3353 to amend federal tax provisions linked to federal or state electric market restructuring activities (Thomas, 2014a).

2002. Subcommittee Chair Dan Ose (R-CA) acknowledged that the Commission's actions in response to the California crisis had helped to end the blackouts and excessively high wholesale electricity rates, allowing rates in the state to return back to normal levels (U.S. Congress. House. Committee on Government Reform. Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, 2003, p. 1). Ose also mentioned that FERC was in the midst of developing a standard market design for wholesale markets; this was important to California because the California Independent System Operator (CAISO) had submitted its own design to FERC for approval, recognizing that if the design were wrong it could lead the state back into another electricity crisis (p. 3).

At the same hearing, Commission Chair Patrick Wood III discussed the market design efforts (p. 28). Part of FERC's efforts to ensure sufficient national electricity infrastructure included a new Office of Market Oversight and Investigations, whose job would be to monitor and to regulate the behavior of ISOs and RTOs (p. 150). Moreover, the Agency recently had completed a rule setting up standards for RTOs, which market participants were strongly advised to join (p. 169). Wood stated that the transition to competitive wholesale markets needed to be laid out as Congress intended in the Energy Policy Act of 1992. In his view, although wholesale competition was a good thing, it did not exist outside of the Northeast, perhaps reflecting growing opposition to such competition particularly in light of the California electricity crisis (p. 29). Wood also reported that FERC's actions taken specifically to get California out of crisis were about to expire, and the state had to have new infrastructure and new regulations in place (p. 149). Finally, he made it clear that new market rules had to ensure that wholesale markets could not be gamed by unscrupulous wholesale market participants (p. 166).

Unscrupulous behavior by such market participants during the California electricity crisis was the subject of another hearing, this one held by the Senate Committee on Energy and Natural Resources. Immediately, a partisan split appeared over how well senators thought FERC was performing. Committee Chair Jeff Bingaman (D-NM) in his opening remarks stated that FERC began investigations into potential wholesale market manipulation that had happened during the California electricity crisis at the request of some of his Senate Democratic colleagues, implying that the Agency may not have done so on its own (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2002b, p. 1). On the other hand, Ranking Member Frank Murkowski (R-AK) congratulated Chairman Wood and FERC for their aggressive pursuit of wrongdoing, with

at least five known major investigations of wholesale prices in the western interconnection (pp. 2-3). Additionally, Murkowski listed all of the new authority the Senate would have granted FERC, including new enforcement powers, more authority to review mergers, the ability to revoke deregulated wholesale rates, and expanded audit powers, in an energy bill that had passed the Senate (p. 4).

Meanwhile, Wood testified at the same hearing that FERC needed to earn back trust in the national energy market following the collapse of the California market (p. 5). Among the steps Wood advocated included establishing better formal and informal regulatory relationships with the states, receiving more funds and staff, and correcting bad practices where they occurred (pp. 5-6). He also wanted staff to investigate filings before they approved any submissions, and he touted the new Office of Market Oversight and Investigation as an example of the Agency's more proactive regulatory approach (p. 6). The Chair indicated that all of these steps were required for market oversight to succeed and for the protection of consumers.

At the same time, Wood indicated what FERC was doing to address unresolved issues caused by the California electricity crisis and to improve regulation of the nation's emerging wholesale markets. The Chairman said that the Commission was involved in numerous investigations of the wholesale market in California, working with other federal agencies in the process (pp. 6-7). He pledged to issue a report to Congress once the investigations were completed (p. 7). As the investigations took place, the Agency also was holding refund hearings to determine if wholesale consumers had been overcharged and if so how much they should be refunded; Commission ALJs were holding hearings to determine if long-term wholesale rates under contracts in the West were appropriate (p. 7). Finally, the FERC Chairman said that the Agency was considering new national rules to address the problem of market power, to provide for market monitoring and mitigation, to plan for transmission, to ensure reliability, and to guarantee the independence of grid operators (p. 7).

Despite these activities at FERC, some legislators, particularly Democrats, continued to be skeptical of the Agency's performance. In a hearing on electricity infrastructure, Senator Maria Cantwell (D-WA) accused FERC of taking a lax approach to regulation that would ultimately harm consumers (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2002a, p. 30). Criticism of FERC went even further as Senate Democrats released the results of a staff investigation and held hearings entitled, "Asleep at the Switch: FERC's

Oversight of ENRON Corporation,” where they described FERC’s regulatory performance as “embarrassing and unacceptable” (U.S. Congress. Senate. Committee on Governmental Affairs, 2003, p. 1). Some of this skepticism may have reflected the region of some of the legislators as much as their partisan or ideological affiliations. It was clear, however, from these comments that the Commission still had more work to do if it was going to satisfy more members of Congress.

FERC Reacts in 2002

Without question FERC spent much of 2002 attempting to mend fences. As the Commission worked to regain the trust of Congress and the states, two more states (Arizona and Montana) suspended their transition to wholesale market competition (Table 6; U.S. Energy Information Administration, 2010). The absence of a crisis also enabled it to return to traditional regulatory responsibilities, confirmed by the orders, opinions, and formal docket in 2002. As one would expect with more time and significantly fewer electric utility-related decisions overall, FERC issued more industry-wide orders and opinions.

The Agency issued four industry-wide orders (Tables 19-20) and eight opinions (Tables 21-22). Three of the orders dealt with forms and how they were filed. Another evidently was made in response to activities by companies like ENRON, its resulting bankruptcy, and economic damage; the order amended accounting and financial reporting requirements for financial documents, income, energy derivatives, and hedging and applied to the entire industry nationally. Of the eight opinions, four responded to transmission questions involving service or tariffs, two focused on wholesale cases, and two others handled wholesale or transmission tariff matters for California utilities, stemming perhaps from the crisis. As FERC seemed to be recovering from the crisis, it applied at least some of the lessons learned to orders and opinions issued for the entire industry.

A return to normalcy for the Commission also can be seen in its docketed decisions. FERC issued a total of 1,765 decisions in 2002 (Tables 24-27), a decline of more than 15% from the previous crisis-plagued year. Additionally, the percentage of the total that was electric utility decisions declined to 54.7%, down from more than 60% in 2001. At the same time, as rates began to return to normal in the western interconnection, the number of (ER) rate cases declined by 19%, and the number of (EC) acquisition and merger decisions decreased by 21.9%. Likewise, the cases concerning exempt wholesale generator status for stand-alone generators

(EG) declined by 48.6%, perhaps in response to the crisis and the number of states deciding to suspend restructuring. As a measure of the need to address problems, some of which arose from the crisis, the number of filings in which one party challenged an action by another (EL) rose by 21.4%. Interestingly, the number of ES decisions involving the assumption of debt or issuance of security remained flat, possibly indicating that the financial condition of utilities had stabilized. Furthermore, the number of cases with mixed prefixes declined by nearly 19%. Probably in response to the crisis were two decisions pertaining to financial audits (PA) performed by the chief accountant at FERC (Federal Energy Regulatory Commission, 2011). Over the same period, the Commission saw its decision workload decline by 14.6%; for office directors the decline was 38.3%, but administrative law judges saw their workload increase slightly.

On one hand it would appear that FERC was returning to a more normal regulatory environment and workload. On the other, though, it obviously was reacting to and attempting to sort out problems left over from the crisis.¹⁹²

Northeast Blackout of 2003

Just as FERC was beginning to recover from problems associated with the California electricity crisis, another crisis appeared. On August 14, 2003, a massive blackout affected parts of the Northeast, Midwest, and provinces in Canada, impacting nearly 50 million people and lasting in some places for four days (U.S. - Canada Power System Outage Task Force, 2004, p. 1). Costs in the U.S. alone ranged from between \$4 and \$10 billion (U.S. - Canada Power System Outage Task Force, 2004, p. 1). Among other problems, the blackout resulted in the release of raw sewage, forced the closure of businesses, disabled cellular service, and disrupted 911 service (U.S. General Accounting Office, 2003, p. 9). The blackout began when a transmission line in Ohio sagged into a tree due to the summertime heat, shorting out the transmission line, and circuit breakers failed to isolate the line from the rest of the system,

¹⁹² Comparing the percentage of cases made up by the different docket prefixes over the same year, 38.3% of the electricity decisions were ER rate decisions, 17% were EG exempt wholesale generator status cases, 16.5% were from EL filings, 10.4% were from EC mergers and acquisitions, and 7.6% were mixed prefix decisions. Of the cases handled that year, 60.7% were decided by the Commission, 32% by the office directors, and 7.3% by the administrative law judges.

causing the outage to cascade throughout much of the interconnected grid in the Midwest and Northeast (U.S. - Canada Power Outage System Task Force, 2004, pp. 17-22).

The blackout demonstrated that market restructuring would not necessarily improve grid reliability as sponsors of the Energy Policy Act of 1992 had suggested. Of the eight states the blackout affected, seven had selected to transition to competitive wholesale electricity markets (Connecticut, Massachusetts, Michigan, New Jersey, New York, Ohio, and Pennsylvania; Table 6; U.S. Energy Information Administration, 2010; U.S. General Accounting Office, 2003, p. 9). Although the transition did not cause the blackout, it certainly did little to prevent it.

Congress Responds

As Congress prepared to respond, it did so with Republicans in charge of both chambers (U.S. Congress. Senate, 2013). The average national nominal retail rate of electricity increased by a little more than three percent between the end of 2002 and the end of 2003, and the average national real retail rate of electricity increased by slightly more than one percent over the same period (Table 4; U.S. Energy Information Administration, 2012). Utilities had net operating incomes of nearly \$29.1 billion, representing almost a 4.8% decline from the previous year (Table 29; U.S. Energy Information Administration, 2011, p. 68). This suggests that overall the financial condition of electric utilities nationally was weakening.

In California the average nominal retail price of electricity actually decreased by almost 3.4%, indicating conditions in the state for electricity continued to improve (Table 31; U.S. Energy Information Administration, 2013c). Pacific Gas and Electric Company reflected this improvement as its debt-to-equity ratios improved (from 58.8/41.2 to 51.4/48.6), though its net operating income actually declined (from \$2.595 billion to nearly \$1.743 billion), likely from purchasing back some of its preferred stock to improve its balance sheet (Table 32; Pacific Gas and Electric Company, 2003, pp. 112, 114; 2004, pp. 112, 114). San Diego Gas & Electric Company had its debt-to-equity ratios improve (from 46.5/53.5 to 44/56), and its net operating income improved (from \$261 million to \$379 million) (San Diego Gas & Electric Company, 2003, pp. 112, 114; 2004, pp. 112, 114). Finally, Southern California Edison Company saw its debt-to-equity ratios improve (from 59.7/40.3 to 52.3/47.7), and its net operating income declined (from \$1.486 billion to \$1.110 billion), probably from purchasing back some of its preferred stock to improve its balance sheet (Southern California Edison Company, 2003, pp. 112, 114; 2004, pp. 112, 114). These numbers reveal that as California moved away from

wholesale competition the financial condition of its utilities improved, while the financial indicators for utilities nationally continued to decline as some states continued to operate under restructured wholesale electricity markets (Table 6).

Responding to the blackout, problems associated with the transition to wholesale competition, and electric utility issues in general, legislators introduced a total of 39 bills in 2003 that directly referenced FERC (Tables 16-17; Thomas, 2014b). Of those bills, 11 were comprehensive, designed to deal with multiple problems facing the electric utility industry; two other bills focused on transmission siting.¹⁹³ All of these bills contained provisions that related to the blackout since they dealt with transmission reliability and the need to improve reliability and prevent power outages. None of the bills passed.

A number of additional bills sought to respond to problems arising out of the California electricity crisis,¹⁹⁴ such as refunds and energy market trading regulation and oversight. All remained either in committee or subcommittee.

Congress, however, was able to pass FERC appropriations, and it held hearings on a number of important topics. Congress appropriated \$204.4 million for FERC for FY 2004, a 6.46% increase over the previous year (Table 15; P.L. 108-137; 117 Stat. 1859). The Senate held hearings on the financial condition of the electric utility industry. Although no FERC representative testified, it shows that Congress had noticed the financial decline of the electric utility industry beginning with the start of the transition by some states toward wholesale

¹⁹³ The comprehensive bills included H.R. 6 [introduced by Representative Billy Tauzin (R-LA)], H.R. 1531 [introduced by Representative Jim McCrery (R-LA)], H.R. 1644 [introduced by Representative Joe Barton (R-TX)], H.R. 3004 [introduced by Representative John Dingell (D-MI)], H.R. 3506 [introduced by Representative Bob Filner (D-CA)], S. 14 [introduced by Senator Pete Domenici (R-NM)], S. 475 [introduced by Senator Craig Thomas (R-WY)], S. 716 [introduced by Senator Mary Landrieu (D-LA)], S. 954 [introduced by Senator Richard Shelby (R-AL)], S. 1005 [introduced by Senator Pete Domenici (R-NM)], and S. 1754 [introduced by Senator James Jeffords (R-VT)] (Thomas, 2014b). The transmission siting bills were H.R. 1338 [introduced by Representative John Shadegg (R-AZ)] and H.R. 1370 [introduced by Representative Albert Wynn (D-MD)] (Thomas, 2014b).

¹⁹⁴ Such bills included H.R. 964 [introduced by Representative Doug Ose (R-CA)], H.R. 1254 [introduced by Representative Greg Walden (R-OR)], H.R. 1272 [introduced by Representative John Dingell (D-MI)], S. 509 [introduced by Senator Dianne Feinstein (D-CA)], S. 681 [introduced by Senator Maria Cantwell (D-WA)], S. 688 [introduced by Senator Bob Graham (D-FL)], and S. 723 [introduced by Senator Barbara Boxer (D-CA)] (Thomas, 2014b).

competition in the mid-1990s (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2003b).

About a week later the House held hearings on the potential for developing a national energy policy, which federal elected officials had discussed since at least the 1970s. Representative Billy Tauzin (R-LA) had introduced a bill, the “Energy Policy Act of 2002,” to provide for comprehensive energy reform; it included reform for the electric utility sector, but the bill died in conference in 2002 (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Air Quality, 2003, p. 5; Thomas, 2014a). With Republicans in control of both the House and Senate in 2003 there seemed to be a greater expectation that an energy bill could be passed. In his opening remarks, Representative Rick Boucher (D-VA), the ranking member, admitted that legislators had not been able to come to a consensus on reform measures for the electric utility sector (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Air Quality, 2003, p. 4). He added that FERC had been very active and had taken creative steps to try to make wholesale markets reliable, while at the same time encouraging debate about the future of the country’s transmission grid (p. 4). The question, of course, was whether and how the Agency’s authority should be altered statutorily to deal with changes happening in the industry.

FERC Chairman Patrick Wood testified that the Commission was focusing on infrastructure, rules, and oversight for wholesale electricity markets, since wholesale competition was an important element of the future of the electric utility industry (p. 38). Wood said that the Commission was reviewing ways to encourage the development of the transmission system, while at the same time the Agency was engaged in proceedings designed to fix problems associated with the California electricity crisis (p. 39). In light of all of FERC’s activities, Wood proposed that Congress give the Agency the necessary authority to find out what the price of electricity was and to monitor the electric market adequately; Congress also should increase both “the civil and criminal legal penalties for violations of the Federal Power Act” (p. 39).

Commissioner William Massey added that utilities were experiencing financial problems due to a lack of confidence in the industry among investors and lenders after the California crisis, the ENRON collapse, a softening national economy, legal actions taken against energy traders for illegal activities, accounting irregularities, bond rating downgrades, and several ongoing federal criminal investigations (p. 47). These financial problems, according to Commissioner Nora

Brownell, added up to more than a \$200 billion loss in stock value for the industry, and she indicated that unless the transition to wholesale competition was completed soon with effective rules and oversight, the result would be higher electricity rates, more power outages, and more financial problems for utilities (p. 55). It was clear in the question and answer period, however, that consensus was difficult to come by even among Republicans over what should and should not be included in a comprehensive national energy bill for electric utilities.

Senate hearings held later in the year revealed the biggest source of disagreement. According to Senator Pete Domenici (R-NM), Chair of the Senate Committee on Energy and Natural Resources, the disagreement between supporters and opponents of open transmission access and FERC's standard market design (SMD) was due in part to regional differences in how the grid was structured (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2003a, p. 2). Domenici suggested that this disagreement could be overcome if legislation curtailed FERC's SMD, while the Agency would have the opportunity to implement a similar approach through other rules or proceedings that allowed for regional differences in the grid systems throughout the country (p. 2).

Finally, Chairman Wood testified in a hearing before the House Committee on Energy and Commerce on steps that could be taken to prevent blackouts. Wood said that the key was investment in new utility infrastructure, the development of regional transmission organizations (RTOs) to manage and plan grid activities on a day-to-day and regional basis, and the creation of an electric reliability organization (ERO) to create and enforce reliability standards on transmission systems throughout the country (U.S. Congress. House. Committee on Energy and Commerce, 2003, pp. 121-122). He also indicated that the Commission was waiting for guidance from Congress before moving ahead any further (p. 122). Finally, Wood acknowledged in the question and answer period that the blackouts occurring in the restructuring era resulted from a lack of utility accountability to NERC over reliability questions as reliability standards at the time were voluntary (p. 161).

FERC Reacts to Congressional Action

In 2003 FERC confronted a series of challenges including the financial decline of the electric utility industry, ongoing response to the California crisis, the Northeast blackout, and legislative gridlock on essential energy legislation. Some in the states and at the federal level evidently had been in such a hurry to establish wholesale market competition that sufficient rules

and oversight were seriously lacking, culminating in many of these challenges. It appears as well that elements of wholesale competition were put into place before corresponding rules and oversight were. By 2003 this cart-before-the-horse approach left FERC and Congress scrambling to put appropriate rules and oversight into place, in some cases after the fact. FERC hoped for additional guidance from Congress in the form of a new statute to clarify and amend elements of the transition to wholesale markets, but it would be nearly two more years before that would happen. Meanwhile, the Agency had to address administratively, to the extent that it could, the lack of accountability that produced the blackout and the malfeasance that led to the California electricity crisis. At the same time, FERC needed to rebuild trust between itself, Congress, and the states as another state (Arkansas) suspended market restructuring¹⁹⁵ (U.S. Energy Information Administration, 2010). The Agency also had to lay out a long-term vision for the nation's grid systems.

FERC responded to these challenges by issuing eight orders (Tables 19-20) and four opinions (Tables 21-22). Two of the orders were administrative, two related to critical energy information, and one added accounting and financial reporting requirements, likely in light of the Enron debacle. Two other orders dealt with delegation of authority, and one developed standards for transmission suppliers. One opinion addressed a grid management charge an independent system operator (ISO) placed on a utility, another involved a participating generator agreement, and a third related to transmission rates; all three involved either utilities in the state of California, the California Independent System Operator (CAISO), or both. The final opinion concerned a transmission service agreement.

Overall, the Commission's docket grew by a little more than two percent from the end of 2002 until the end of 2003 (Tables 24-27). Electric utility decisions grew by about 9.3% over the same period, and in 2003 such decisions made up 58.5% of FERC's total decisions, marking almost a four percent increase from the previous year. Not surprisingly, this suggests that as the problems with utilities worsened a larger share of FERC's docket addressed these problems. Much as in the 1970s, as utilities struggled financially the number of rate cases (ER) increased, resulting in a 12.7% increase in such decisions over the previous year. Confronted by the ever

¹⁹⁵ Arkansas was the sixth of seven states to suspend restructuring; Virginia became the seventh and final state to do so in 2007 (U.S. Energy Information Administration, 2010). After Virginia suspended restructuring, only 15 states had restructured wholesale electricity markets; see Table 6.

present need to address cases arising from the California electricity crisis, financial problems in the industry, and federal criminal investigations of wrongdoing by energy traders, the Agency saw its EL filings where one party challenges the actions of another increase by 27%. The number of merger and acquisition decisions (EC) increased by 30% after experiencing a decline in 2002, and the number of stand-alone generators seeking exempt wholesale generators status (EG) declined by 35.76%. Although investors and lenders were losing confidence in the industry as a place to invest or loan money, the number of the issuance of security or assumption of debt decisions (ES) remained stable.

Fifteen of the decisions made that year were financial audits (PA) by the chief accountant at FERC, likely investigating potential accounting irregularities at some of the market participants (Federal Energy Regulatory Commission, 2011). Moreover, adding work to the Agency, the Commission issued its first critical energy infrastructure decision (CE), limiting access to sensitive national energy information after the terrorist attacks of September 11, 2001 (Federal Energy Regulatory Commission, 2011). In the future someone seeking energy information the federal government classified as sensitive would have to apply to FERC and receive approval in a CE decision before they could expect to get the requested information.

In an effort to deal with its burgeoning electric utility case load, FERC had a 38.36% increase in the number of decisions with multiple mixed docket prefixes. Crisis response also meant that the Commission saw its workload increase by 8.2%; for administrative law judges the increase was 108%, but office directors experienced a decline of 11.65%.¹⁹⁶ Of the 2003 decisions, the Commission issued 60.09%, office directors 25.88% and ALJs 14.03%.

Waiting for a Congressional Response

By exercising comity FERC had been tardy and reactive in its response the California electricity crisis (Joskow, 2001, p. 374; Wolak, 2005, p. 165). Both from the crisis and the criticism it received, the Agency apparently learned valuable lessons. Its regulatory posture needed to be far more proactive to prevent or at least mitigate problems before or as they occurred. Such a posture, however, would only go so far as the Agency had to cope with partisan, ideological, regional, and statutory constraints that limited its ability to deal with

¹⁹⁶ In terms of comparing the docketed decisions with each other in the same year, ER decisions made up 39.5% of FERC's electric utility docket. Meanwhile, EL decisions comprised a little over 19% of the total, EC cases a little over 12%, and EG ten percent. Mixed decisions were about 9.6%, and ES cases accounted for just over 4.8% of all electric utility decisions.

problems related to the electric utility industry. What FERC needed, and what it had been begging for since the mid-1990s, was congressional action on the transition to competitive wholesale electricity markets. Since 2004 was a presidential election year, the Commission would have to wait at least another year.

2004 Legislative Action

As Congress prepared to act in 2004 it did so in the face of data that generally suggested electric utilities might be teetering financially. But utilities did provide some good news. From the end of 2003 until the end of 2004 the average national nominal retail rate of electricity increased by slightly more than two percent, while the average national real retail rate decreased by half of a percent (Table 4; U.S. Energy Information Administration, 2012). Meanwhile, net utility operating incomes rose to almost \$31.8 billion, about a nine percent increase from 2003 (Table 29; U.S. Energy Information Administration, 2011, p. 68).

The financial news for electric utilities in California appeared mixed as well. On the bright side, in 2004 the average state retail rate of electricity declined by slightly more than three and a half percent (Table 31; U.S. Energy Information Administration, 2013c). Pacific Gas and Electric Company saw its debt-to-equity ratios improve (from 51.4/48.6 to 46.9/53.1), while its net operating income rose to more than \$4.5 billion, a 159% increase (Pacific Gas and Electric Company, 2004, pp. 112, 114; 2005, pp. 112, 114). However, on the discouraging side, the debt-to-equity ratios of San Diego Gas and Electric Company declined (from 44/56 to 51.6/48.4), while its net operating income also decreased to slightly more than \$250 million, about a 34% drop from 2003 (San Diego Gas and Electric Company, 2004, pp. 112, 114; 2005, pp. 112, 114). At the same time, Southern California Edison Company had its debt-to-equity ratios decline (from 52.3/47.7 to 55.8/44.2), but its net operating income improved to about \$1.256 billion, a 13% increase from the previous year (Southern California Edison Company, 2004, pp. 112, 114; 2005, pp. 112, 114).

In 2004 legislators introduced 20 bills that directly referenced the Federal Energy Regulatory Commission (Tables 16-17; Thomas, 2014c).¹⁹⁷ Once again, likely to the chagrin of

¹⁹⁷ Six of the bills including H.R. 4206 [introduced by Representative Randy Cunningham (R-CA)], H.R. 4503 [introduced by Representative Joe Barton (R-TX)], S. 2014 [introduced by Senator Maria Cantwell (D-WA)], S. 2095 [introduced by Senator Pete Domenici (R-NM)], S. 2236 [introduced by Senator Cantwell], and S. 2311 [introduced by Senator Olympia Snowe (R-ME)] were comprehensive energy reform bills of various kinds, however none of the bills passed

FERC Commissioners, Congress demurred from statutory fixes for the electric utility industry. Congress also held no hearings in 2004 that included representatives from FERC on issues directly related to electric utilities.

Legislators did pass \$210 million in appropriations for FERC for fiscal year 2005, about a 2.7% increase over fiscal 2004 (Table 15; P.L. 108-447; 118 Stat. 2957). This minimal budget increase came at a time when the Commission was dealing with myriad problems surrounding the electric utility industry.

FERC Reacts to Congressional Inaction and Utility Problems in 2004

FERC remained quite active throughout 2004, issuing four orders (Tables 19-20) and 12 opinions (Tables 21-22) for electric utilities. Of the orders, one involved accounting and financial reporting, one was administrative, one related to critical energy information, and one involved the delegation of authority. Four dealt with transmission service, three involved more specific aspects of transmission rates, one regarded a system agreement modification, one had to do with a utility interconnection with PJM, one concerned the sale of assets, one related to transmission interconnection credits, and one affected an access charge for transmission service. It is also useful to note that several of the opinions dealt specifically with matters relevant to utilities in California and might have been related in some way to the crisis.

In the meantime, FERC's activity spilled over into its formal docket (Tables 24-27) as it issued about 4.6% more total decisions in 2004 than it had the previous year. Much of the increase came from electric utility-related decisions, which rose about 23.67% from 2003. As a result, electric utility-related decisions made up over 69% of all docketed decisions, almost an 11% increase. Based upon the financial difficulties facing utilities and their inability to borrow money or to get investors to purchase securities, it should not come as a surprise that rate cases (ER) increased by slightly more than 18% from the previous year. In a sign perhaps that cases arising from the California crisis were beginning to diminish, there was a modest 2.5% decrease in the number of filings with the Commission where one party challenged actions taken by another (EL). The number of merger and acquisition decisions (EC) increased by nearly 18.5%,

(Thomas, 2014c). Three other bills including H.R. 5049 [introduced by Representative Jay Inslee (D-WA)], S. 2015 [introduced by Senator Cantwell], and S. 2633 [introduced by Senator Barbara Boxer (D-CA)] were introduced to provide for refunds or to increase rules and to tighten the oversight over wholesale electricity markets in response to the California electricity crisis; none of the bills were passed (Thomas, 2014c).

suggesting that poorly performing utilities may have been selling at least some of their assets to other more financially stable entities. FERC evidently responded to its growing electric utility docket by issuing more mixed prefix decisions resolving multiple issues at the same time; the number of mixed prefix cases grew by 34.65%. At the same time, the number of stand-alone generators seeking exempt wholesale generator status (EG) declined by a modest 5.67%. Signaling perhaps growing debt problems for utilities, the number of sale of security and assumption of debt decisions (ES) increased by slightly more than 17.5%.

Moreover, in a move likely to encourage greater grid reliability and prevent blackouts, FERC issued its first three transmission standard decisions (TS) (Federal Energy Regulatory Commission, 2011). Finally, in terms of the distribution of work, the Commission's workload increased by 13.88%, that of office directors by 52.38%, and that of ALJs by 13.51%.

Comparing numbers across 2004 also provides some results worth reviewing. The ER rate decisions made up 37.75% of the Commission's electric utility docket in 2004, while EL cases were slightly more than 15% of the total. This suggests that rates and challenges to past behavior by participants in the electric utility system remained major areas of concern. The merger and acquisition cases (EC) made up 11.79% of the docket, indicating that utilities may have been doing what they could to raise cash to pay down some of their debts by selling assets. Since 10.4% of the decisions were mixed prefix cases, one would infer that FERC was trying to expedite its case load despite the growing number of cases it was addressing. One surprise, however, was that ES decisions made up nearly 4.6% of the decisions in 2004; one would have expected that number to be lower as many utilities could not borrow money or get investors to invest due to their troubled financial conditions. Finally, in 2004 the Commission addressed roughly 55% percent of the decisions, office directors about 32%, and administrative law judges almost 13%, a distribution not notably different from 2003.

Energy Policy Act of 2005

Following the 2004 elections with Republicans retaining control, a comprehensive energy law finally passed. On August 8, 2005, the Energy Policy Act of 2005 (P.L. 109-58; 119 Stat. 594) was signed into law by President George W. Bush. The statute contained many of the provisions FERC had wanted including mandatory transmission reliability standards, an electric reliability organization (ERO), encouragement of the development and operation of non-profit RTOs and ISOs, and greater transmission coordination with Canada and Mexico (P.L. 109-58;

119 Stat. 941-946; §1211; §215). Additionally, the Act established National Interest Electric Transmission Corridors to be designated periodically by the Secretary of Energy, and FERC could site new transmission facilities in areas of the country designated as corridors (P.L. 109-58; 119 Stat. 946-951; §1221; §216). The statute also provided for ways to finance new transmission facilities (P.L. 109-58; 119 Stat. 952-953; §1222), and it required FERC to establish transmission rates based upon incentives and performance (P.L. 109-58; 119 Stat. 961; §1241; §219). Moreover, it repealed the Public Utility Holding Company Act of 1935, allowing FERC and state public utility commissions again to have primary rate-making jurisdiction over utility holding companies, which they had sought since *Ohio Power* (P.L. 109-58; 119 Stat. 972-978; §§ 1262-1277). Finally, the Act expanded the Commission's authority to punish violations of federal electric utility laws, and it required the Agency to expedite refunds for wholesale consumers in California (P.L. 109-58; 119 Stat. 978-984; §§1281-1290).¹⁹⁸

The statute gave FERC much of what it had wanted. However, the bad news was now Congress would likely be less willing to accept excuses from the Agency if something went wrong with electric utilities.

Other Congressional Action in 2005

As Congress acted in 2005, utilities still suffered from the after effects of some of the problems associated with the transition to competition in wholesale electricity markets. This was reflected in the average national nominal retail rate of electricity, which rose by nearly seven percent between the end of 2004 and the end of 2005 (Table 4; U.S. Energy Information Administration, 2012). Similarly, the average national real retail rate of electricity increased by about 3.6% over the same period (U.S. Energy Information Administration, 2012). More bad news for utilities could be found when looking at their net operating incomes, which declined to roughly \$28.87 billion, about a nine percent decrease since the end of 2004 (Table 29; U.S. Energy Information Administration, 2011, p. 68).

Since California and its utilities were ground zero for much of the suffering it is instructive to see how they performed after the crisis had ended. Much like utilities at the national level, those in California were beginning again to have some difficulties. Between the end of 2004 and the end of 2005, these problems manifested themselves in the average state

¹⁹⁸ FERC had expressed strong support for nearly all of the provisions of the Energy Policy Act of 2005 at one time or another in congressional hearings.

nominal retail rate of electricity, which increased by nearly 2.5% (Table 31; U.S. Energy Information Administration, 2013c). Likewise, PG&E had its debt-to-equity ratios decline (from 46.9/53.1 to 54.5/45.5), and its net operating income decreased 69% from the previous year to roughly \$1.39 billion (Table 32; Pacific Gas and Electric Company, 2005, pp. 112, 114; 2006, pp. 112, 114). Meanwhile, SOCAL had mixed results; its debt-to-equity ratio improved slightly (from 55.8/44.2 to 54.7/45.3), while its net operating income declined to roughly \$969 million, a decrease of about 23% (Southern California Edison Company, 2005, pp. 112, 114; 2006, pp. 112, 114). More positively, SDG&E saw its debt-to-equity ratios improve slightly (from 51.6/48.4 to 51/49), and its net operating income grew to about \$281.5 million, roughly 12.4% (San Diego Gas and Electric Company, 2005, pp. 112, 114; 2006, pp. 112, 114).

Members of Congress responded to the ongoing problems for electric utilities by passing the Energy Policy Act of 2005 and by introducing a number of other bills. A total of 46 bills (counting amendments) were introduced in 2005 that directly referenced the Federal Energy Regulatory Commission (Tables 16-17; Thomas, 2014d).¹⁹⁹

¹⁹⁹ Eleven comprehensive electric utility reform bills were not entitled “Energy Policy Act,” including H.R. 878 [introduced by Representative John Dingell (D-MI)], H.R. 1481 [introduced by Representative Albert Wynn (D-MD)], H.R. 1529 [introduced by Representative John Shadegg (R-AZ)], H.R. 1541 [introduced by Representative William Thomas (R-CA)], H.R. 1834 [introduced by Representative Randy Cunningham (R-CA)], H.R. 4384 [introduced by Representative Christopher Shays (R-CT)], S. 426 [introduced by Senator James Jeffords (R-VT)], S. 498 [introduced by Senator Richard Burr (R-NC)], S. 596 [introduced by Senator Craig Thomas (R-WY)], S. 680 [introduced by Senator Olympia Snowe (R-ME)], and S. 1031 [introduced by Senator Maria Cantwell (D-WA)]; none of the bills passed (Thomas, 2014d). Another four bills sought to encourage the development of alternative energy including H.R. 2938 [introduced by Representative John Duncan (R-TN)], S. 1034 [introduced by Senator Lamar Alexander (R-TN)], S. 1208 [introduced by Senator Alexander], and S. 1596 [introduced by Senator Cantwell]; all of the bills remained either in committee or subcommittee (Thomas, 2014d). Three wholesale electricity market reform bills were introduced in response to the California crisis including S. 33 [introduced by Senator Cantwell], S. 509 [introduced by Senator Dianne Feinstein (D-CA)], and S. 870 [introduced by Senator Cantwell]; none of the bills passed (Thomas, 2014d). There were also three Energy Policy Act bills H.R. 6 [introduced by Representative Joe Barton (R-TX)], H.R. 1640 [introduced by Representative Barton], and S. 10 [introduced by Senator Pete Domenici (R-NM)], which became the Energy Policy Act of 2005 (P.L. 109-58; 119 Stat. 594) (Thomas, 2014d). It is important to note that the Energy Policy Act of 2005 contained an amendment (S.AMDT.870) introduced by Senator Barbara Boxer (D-CA) designed to expedite refunds to wholesale electricity consumers in California (Thomas, 2014d). Also, perhaps to gain the support of Democratic legislators who supported alternative energy

Legislators also passed an appropriations increase of nearly five percent for FERC for fiscal 2006 with an appropriation of \$220.4 million (Table 15; P.L. 109–103; 119 Stat. 2277) and held a number of hearings involving FERC and electric utility regulation. To get a sense of just how much of its wish list that FERC got when the Energy Policy Act of 2005 passed, it is useful to examine testimony by the Commission’s General Counsel, Cynthia Marlette, prior to the statute’s passage. Marlette argued that Congress had to pass comprehensive legislation addressing changes that had occurred in the electric utility industry since the passage of the Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2776); the need was highlighted by the California electricity crisis, the financial problems of utilities, and the blackout (U.S. Congress. House. Committee on Energy and Commerce. Subcommittee on Energy and Air Quality, 2005, p. 27). To improve electric utility performance she indicated that the legislation should include provisions to encourage development of wholesale markets, stimulate the development of new facilities, improve reliability oversight, and provide the Commission with additional authority to punish market abuses (p. 27).

Marlette then detailed what such provisions ought to look like. First, utilities should be required to operate under mandatory reliability standards created and enforced by either NERC or the regional reliability entities with enforceable penalties for violations, and this should include operator training and standards for vegetation management around transmission lines to prevent blackouts (p. 27). An Electric Reliability Organization (ERO) should be created with the ability to order utilities to build new transmission facilities with state or federal approval, and the federal government should have the ability to site new facilities in areas of the country designated by the Secretary of Energy as corridors having insufficient transmission facilities required to meet demand (p. 28). Moreover, Marlette supported provisions to enhance FERC’s criminal and civil penalty authority for violations of the Federal Power Act, as well as provisions requiring price transparency on wholesale and transmission activities (pp. 28-29). In addition, she supported the repeal of PUHCA and requirements that utilities provide access to their records to both FERC and the state public utility commissions; she also approved limitations on PURPA’s must purchase requirement of utilities from qualifying facilities (p. 29). Finally, Marlette concurred with provisions seeking to encourage the development and operation of

legislation, the statute contains net metering provisions (P.L. 109-58; 119 Stat. 962-970; §§ 1251-1253).

RTOs and ISOs as a way to improve reliability, and she supported rate incentives to foster reliability through the development of new transmission facilities and to encourage more investment in such facilities (p. 30). Although she generally agreed with the provisions in the proposed legislation, Marlette offered a few minor changes to improve the legislation.

Congress also sought the Commission's input on other matters. For example, the Senate Committee on Environment and Public Works held a hearing on the difficulty of siting energy projects (U.S. Congress. Senate. Committee on Environment and Public Works, 2005). At the hearing, Mark Robinson, the Director of the Office of Energy Projects at FERC, described the process to site energy projects as "byzantine," largely due to statutory and regulatory conflicts resulting from energy and environmental laws (pp. 7-8). To make the siting process less costly, less time consuming, and more productive, resulting in completed projects that complied with environmental laws, he had three suggestions: giving one agency ultimate siting authority, making all agencies develop one shared public record at a time picked by the lead agency, and providing for a direct appeal of any decision to a federal court of appeals (p. 8). This testimony reinforces that from its creation FERC has had difficulties establishing relationships with other federal agencies and among the states to promote and attain responsible energy development.

FERC Reacts to Congress and the EPAct of 2005

Much changed for FERC in 2005. First, it got a new chair, Joseph Kelliher (Federal Energy Regulatory Commission, 2013b). Next, of course, the Agency saw a tremendous increase in its regulatory authority due to the passage of the Energy Policy Act of 2005. Finally, it would appear that many of the problems emanating from the California crisis and from the Northeast blackout were subsiding; however, FERC still confronted an electric utility industry that on the whole appeared to have a bleak financial future.

The Commission was very active in 2005. It issued 13 industry-wide orders (Tables 19-20) and four opinions (Tables 21-22). Five of the orders (Table 20) were administrative, two related to issues found in the Energy Policy Act of 1992, two concerned matters found in the Energy Policy Act of 2005, one involved accounting and financial reporting, one regarded critical energy information, one pertained to the delegation of authority, and one involved interlocking directorate positions. Three of the opinions related to transmission issues, and one involved the allocation of costs in a system agreement.

Additionally, in 2005 the Commission issued 2,032 formal decisions, an increase of 7.6% over the previous year (Tables 24-27). Electric utility decisions accounted for almost 71% of the total. Overall, electric utility decisions increased by a little more than 10% from the end of 2004 until the end of 2005. Much of the growth occurred in the rate cases (ER), which rose 29% from the previous year. This increase makes sense as utilities that were in financial trouble may not have been able to borrow money or to get investors to invest in them, leaving rate increases as the only other potential source of revenue. Another decision type that increased from 2004 was mixed prefix cases, which rose 29.4%. The other major increase, of 157%, occurred in critical energy information decisions (CE) as FERC in response to the terrorist attacks of September 11, 2001 continued its attempts to control the kinds of information that the public could gain access to.

Much of the rest of FERC's docket experienced a year-to-year decline. For example, the number of EL decisions decreased by 8.6% as cases resulting from the California crisis and possibly the blackout may have ebbed somewhat. Although it is not clear why, the number of merger and acquisition decisions (EC) experienced a decrease as well, falling by 5.8%. Meanwhile, the number of exempt wholesale generator status decisions (EG) fell by 11%, perhaps affected by the repeal of PUHCA. As one would expect, given the general financial decline of electric utilities and the associated reticence of investors and lenders to supply the utilities with funding, the number of assumption of debt and issuance of security decisions (ES) dropped by 65%.

It also appears the nature of the cases that the Commission reviewed in 2005 affected the distribution of work. The number of ER rate cases and Commission decisions rose together. The Commission experienced about a 21.5% (155 cases) annual increase in the number of decisions it issued. Mixed cases only increased by 40 decisions and office directors handled many of the critical information decisions. Office directors experienced about a 7.7% decrease in their workload compared to 2004; this decline might be explained in part by the drop in the number of QF decisions of 52% (47 decisions), and the 11 decision reduction in EG cases. Increases in the number of ER cases also may have increased the number of decisions ALJs issued, as their workload increased by 4.76%.

Comparing decisions in 2005, one can see that ER decisions made up about 44.26% of the total electric utility-related docket. At the same time, EL decisions made up 12.5%, mixed

cases 12.25%, EC decisions about 10%, and CE cases roughly 7.5%. Over the same period the Commission issued 61% of the decisions, the office directors 26.7%, and administrative law judges 12.3%. Due to a combination of crisis response and implementation of the Energy Policy Act of 2005, commissioners did more of the decision making; to an ever larger extent those decisions involved some aspect of transmission or wholesale rates.

Waiting for Full Implementation – 2006

Congress Waits Watchfully

As legislators had done in the past after passing a major piece of legislation, they largely waited to see what would happen following the passage of the Energy Policy Act of 2005 as FERC began to implement it. This did not prevent utilities from experiencing more financial pain in 2006 as average national nominal retail rates for electricity rose more than nine percent, and average national real retail rates increased by nearly six percent (Table 4; U.S. Energy Information Administration, 2012). On a more positive note, utilities experienced a modest increase of 3.6% in their net operating incomes (U.S. Energy Information Administration, 2011, p. 68).²⁰⁰

Like most utilities in the rest of the country, those in California faced at best mixed financial news. The average state retail rate of electricity increased by more than 10% in 2006 (Table 31; U.S. Energy Information Administration, 2013c). Assisted perhaps by these higher retail rates, PG&E had its debt-to-equity ratio improve (from 54.5/45.5 to 51.7/48.3), and its net operating income rose to more than \$1.5 billion, about an 8.7% increase from the previous year (Pacific Gas and Electric Company, 2006, pp. 112, 114; 2007, pp. 112, 114). SDG&E saw its debt-to-equity ratios improve (from 51/49 to 47.5/52.5), and its net operating income rose almost 25%, to a little more than \$352 million (San Diego Gas and Electric Company, 2006, pp. 112, 114; 2007, pp. 112, 114). Finally, SOCAL saw some modest improvement as well: its debt-to-equity ratios improved (from 54.7/45.3 to 54.3/45.7), and its net operating income grew to more than \$1.054 billion, an 8.8% increase (Southern California Edison Company, 2006, pp. 112, 114; 2007, pp. 112, 114).

²⁰⁰ The generally dismal financial state of most electric utilities was confirmed a year later when it was reported that less than 20% of rated utilities had bond ratings of A- or better (McDermott, 2012, p. 20). This represented more than a 40% decline in the number of utilities with such ratings since 1995 (see Table 30; U.S. Energy Information Administration, 1996b, p. 555).

Although the initial move toward competitive wholesale markets clearly had an ongoing and negative financial impact on electric utilities, it was unclear whether the Energy Policy Act of 2005 would resolve any of those problems, if more legislation was needed, or if legislation of any kind could accomplish anything. Likely a combination of waiting to see what the new Act would do and preparing for elections in 2006 meant that legislators only introduced 12 bills (Tables 16-17; Thomas, 2014e). One, H.R. 5823 [introduced by Representative Sue Kelly (R-NY)], would have limited the use of eminent domain to site transmission lines,²⁰¹ and a House amendment (H.AMDT.928) [introduced by Representative Jay Inslee (D-WA)] would have prevented the use of federal funding to enforce a legal claim by a utility that FERC found had been involved in market manipulation activities in California during the crisis; neither passed (Congressional Research Service, 2014; Thomas, 2014e). Moreover, Congress appropriated just over \$221.9 million for FERC in fiscal year 2007, an increase of 0.7% (Federal Energy Regulatory Commission, 2007a, p. 5).

Congressional hearings might provide a better idea of what Congress was up to. Watchful waiting is buttressed by the fact that legislators held several hearings in 2006 on the Act's implementation. In May 2006, the Senate Committee on Energy and Natural Resources held a hearing on the implementation of reliability provisions (U.S. Congress. Senate. Committee on Energy and Natural Resources, 2006). FERC General Counsel John Moot testified that the Agency had already issued a final rule to implement the reliability provisions, after receiving comments from the electric utility industry and NERC (p. 2). Next steps included certifying an ERO (which NERC had applied to be), reaching final approval of mandatory reliability standards after input from the industry and NERC, and finalizing agreements among regional delegations (pp. 2-3).²⁰² Moot also observed in the question and answer period that the biggest challenge

²⁰¹ This legislation may have reflected opposition among some in the states to siting any new transmission facilities; the Energy Policy Act of 2005 was designed to overcome that opposition through establishment of the corridors. Siting by FERC in the corridors also could be done through the use of eminent domain (P.L. 109-58; 119 Stat. 946-951; § 1221; § 216), and this bill sought almost immediately to rein in FERC's ability to use eminent domain in such cases.

²⁰² Regional grid systems operate differently and often separately from each other, and these differences were one of the causes of Congress's slowness in passing comprehensive energy reform. To make it easier to operate these regional systems the statute established regional bodies made up of delegations of people from the affected states (P.L. 109-58; 119 Stat. 945-946; § 1211; § 215).

would be to allow for input and communicate what the Commission was trying to accomplish with the establishment of the new mandatory reliability standards (p. 13). In response to a question from Senator Craig Thomas (R-WY), Moot said the Agency had adopted Order 672, which allowed for differences in reliability standards across regions if the physical operation of the grid systems required them (p. 13). From the testimony it is clear that FERC spent much of 2006 trying to put many of the provisions of the Act into effect, and it was too soon to determine the effect of these provisions on the electric utility industry.

Another hearing, this one before the House Subcommittee on Energy and Resources, mentioned that many of the problems the electric utility industry faced by had been around for a decade or more, raising the possibility that it could take a long time to fix them as well (U.S. Congress. House. Committee on Government Reform. Subcommittee on Energy and Resources, 2007). The hearing focused on the potential for power outages due to high summer time temperatures and a decaying grid system incapable of keeping up with increased demand. In his opening remarks Representative Dennis Kucinich (D-OH) blamed wholesale market restructuring for reliability problems and higher electricity rates (p. 11). However, FERC Chairman Joseph Kelliher also reminded the Subcommittee that other factors contributed to problems with the electric grid, including chronic long-term underinvestment in the nation's transmission system dating back at least to the 1970s (p. 14). With the passage of the Energy Policy Act of 2005 FERC had tools to site new transmission systems in areas of the country where past under-investment and siting of such facilities had been major problems, though it would take some time to get these new facilities up and running (p. 14). Moreover, Kelliher said, in terms of the overall power supply, state and the federal governments still had to work together because siting for generation, distribution, and much transmission outside of the corridors remained up to the states (p. 30).²⁰³

FERC in 2006

Congressional testimony indicated that FERC was moving as quickly as possible to implement many of the provisions of the Energy Policy Act of 2005, and most legislators seemed willing to give both the statute and the Agency time to fix some of the endemic problems of the electric utility industry.

²⁰³ States still regulated retail issues, while FERC's focused primarily on wholesale matters.

In 2006, FERC issued 15 orders (Tables 19-20) and seven opinions (Tables 21-22). Seven of the orders implemented elements of the Energy Policy Act of 2005, three were administrative, two involved accounting and financial reporting, one regarded critical energy information requests, one related to provisions found in the 1992 Energy Policy Act, and one concerned electronic filing of a form (Table 20). Three of the opinions involved transmission issues, one related to a power purchase agreement, one concerned a wholesale contract, one examined return on equity in a case involving an RTO, and one dealt with the reorganization of a cooperative.

Driven perhaps by how busy FERC was, for the first time over the period of the entire study the Commission's formal docket decreased in a year when both national nominal and retail rates increased. In 2006 the Agency issued a total of 1,821 formal decisions, a decline of more than ten percent over the previous year (Tables 24-27). Even as utilities continued to struggle and rates increased, the number of formal electric utility related decisions fell by about 14.5%. This percentage drop was exceeded by rate decisions (ER), which decreased by more than 20.75%. At the same time, the number of decisions where one party challenged the actions of another (EL) declined by about 17.8%. Although the number of mixed prefix cases actually receded by a little more than two percent, this does not account for decisions where there were multiple docket numbers with the same prefix. Other notable areas of decline included exempt wholesale generator status decisions (EG) that fell by 72%, due likely to the repeal of PUHCA, and a decline of about 21% in critical energy information cases (CE).

Notable areas of FERC's docket, however, saw an increase in 2006. For example, the number of merger and acquisition cases (EC) rose by almost seven percent, perhaps reflecting more utilities selling off assets to bring in more revenue. Also of note was a 233% increase in the number of assumption of debt and issuance of security cases (ES). Although prior to the enactment of the statute utilities had a difficult time borrowing money or gaining investors, the law contained provisions designed to encourage more investment particularly in transmission systems; those provisions may have had an effect. Finally, the number of interlocking directorate decisions (ID) also experienced a major increase of 300%.

Over the course of the year, decisions contained new prefix designations and the distribution of work at the Agency changed. Four decisions contained only the prefix RR, rules and filings made by the Electric Reliability Organization (ERO) (Federal Energy Regulatory

Commission, 2011). Two PH decisions pertained to waivers from a holding company designation that entities applied to receive (Federal Energy Regulatory Commission, 2011). Possibly in keeping with its efforts to implement the Energy Policy Act and having less time to deal with other matters, the Commission issued nearly 20% fewer decisions in 2006 than it had the previous year. Likewise, the office directors issued almost 12% fewer decisions, while ALJs experienced a six percent increase in decisions.²⁰⁴

Network Responses, Federal Regulatory Equilibrium, and State Variations

The Energy Policy Act of 1992 included provisions that allowed states and entities in the electric utility industry to choose to move ahead with wholesale market restructuring. Some states and entities did so without a clear set of consistent rules and oversight. The consequences proved to be disastrous. As wholesale prices spiraled out of control in some cases (e.g., the Midwest price spike and the California electricity crisis), both the states and entities in the electric utility industry turned to FERC and Congress to solve the problem. Unfortunately for the industry and consumers, FERC and Congress were tardy in responding. FERC was late because it exercised comity, while Congress initially was incapable of responding because of partisan, ideological, and regional conflicts over how best to resolve the difficulties. Once the Commission did respond it was able to stabilize the situation and was beginning, based on national retail rate information, to turn the problems around when the Northeast blackout appeared to reverse the positive momentum. Meanwhile, when Congress finally acted by passing the Energy Policy Act of 2005, it was unclear whether the statute would or could undo the damage.

Private Electric Utilities

Few entities suffered as much from the damage caused by the initial attempt to transition to competitive wholesale electric markets than the utilities themselves. In California alone, one

²⁰⁴ Comparing the decisions and the distribution of work over the same year also might provide useful insight. The ER decisions made up slightly more than 41% of the total number of electric utility related decisions. Mixed cases made up almost 14% of the total, EC decisions around 12.6%, EL prefixes were about 12%, and CE decisions roughly seven percent. It would appear that although FERC had less time to deal with formal electric utility matters outside of the implementation of the statute, when it did address issues relevant to utilities rates still were at the top of the list of concerns for everyone involved in the electric utility industry. The Commission handled 57% of the decisions, which was about a four percent decline from 2005. Office directors resolved about 28% of the decisions, a modest increase of 0.9%, and administrative law judges adjudicated slightly more than 15%, roughly a three percent increase over 2005.

utility was forced to declare bankruptcy and the two others considered doing so. However, the failures were felt well beyond California as nationally utilities saw their debt-to-equity ratios worsen, their net operating incomes decline, and their bond ratings collapse. These difficulties were compounded by the fact that by the mid-2000s investors would not invest in utilities and lenders would not lend money because utilities were considered to be such poor financial risks. As a result, utilities were forced to seek higher retail electricity rates to improve their otherwise deteriorating balance sheets, much as they had done in the 1970s when they experienced similar financial difficulties (though for different reasons). Since utility performance has always been one measure of FERC's success, it likely put pressure on the Agency to do what it could to help utilities perform better financially and may explain some of the commissioners' testimony about the performance of utilities.

State Public Utility Commissions

State public utility commissions were on the front line in responding to the problems caused by wholesale competition. First, if a state decided to establish competitive wholesale markets, FERC left it up to the state to develop a market design and to implement it. Yet the Commission could and did in some cases reject design proposals or elements of them submitted by state PUCs. For example, FERC rejected some of the elements of the plan submitted by the California PUC and asked the PUC to make appropriate changes. Moreover, once competition began to flounder and utilities began to suffer financially, it was the state PUCs that were forced to approve retail rate increases for utilities or face the possibility a utility might go out of business.

The passage of the Energy Policy Act of 2005 also had serious implications for state public utility commissions. This was particularly true in states where the state or a portion of the state was designated by the Secretary of Energy as a National Interest Electric Transmission Corridor. In these corridors, if there was a proposal to build or to expand a transmission facility, the state public utility commission had one year to site the project (P.L. 109-58; 119 Stat. 946-955; § 1221; § 216). If the project was not sited in that time, FERC could step in and site the project, acquiring the land required through the assertion of eminent domain preempting state authority. The Act's transmission provision put great pressure on state PUCs in corridors to approve transmission projects or face the prospects of losing siting authority to FERC. It also likely added to an already tense relationship between FERC and the state PUCs, and it may have

been another reason why several states chose to suspend their transitions to wholesale markets.²⁰⁵

Consumers

Besides private electric utilities, consumers probably were the biggest losers in the experiments with wholesale competition. First, as already mentioned, when utilities ran into financial problems due to competition their only choice to raise money was either to sell off assets or to seek and gain higher retail rates from state PUCs. It is clear from the statistics on the average national retail price of electricity that many utilities succeeded in gaining higher retail rates, passing along their financial pain to retail consumers. Although retail consumers complained about the higher rates, particularly in California, the complaints could not overcome the partisan, ideological, and regional conflicts in Congress to push the body to act. FERC did react, albeit belatedly, to these complaints and tried to resolve some of the problems, in part to improve utility performance and in the process get rates back down.

FERC's efforts were partially thwarted, however, by another problem. The market transition and the resulting competition seemed not only to produce higher retail rates; they also generated reliability problems in the form of blackouts. California experienced rolling blackouts during its crisis; the Northeast experienced a massive blackout in 2003, with most of the states involved having competitive wholesale markets. Blackouts cause inconvenience for some consumers, but for others an extended period without electricity can be life-threatening. These difficulties, the burdens they placed on consumers and the consumer responses may have helped to overcome the inertia in Congress, resulting in the passage of the Energy Policy Act of 2005 and expanded regulatory authority for FERC.

Qualifying Facilities

Qualifying facilities perhaps were the greatest beneficiaries of wholesale markets, along with wholesale electricity traders and stand-alone generators. Under the terms of PURPA, utilities were required to purchase electricity from qualifying facilities (P.L. 95-617; 92 Stat. 3144; § 210), and in practice the rates charged for such electricity often were higher and uncompetitive with other forms of electric power generation. Moreover, in the case of California, when the state required its participating utilities to divest all their fossil fuel

²⁰⁵ Recall that if a state opted for restructuring, it effectively gave more authority to FERC when electricity transactions occurred.

generation it essentially forced utilities to purchase electricity from qualifying facilities in the day-ahead and real time spot markets. This drove wholesale prices in the spot market exponentially higher and nearly bankrupted the utilities. In response to these and similar price problems associated with qualifying facilities, Congress included a provision in the 2005 Energy Policy Act allowing utilities an opportunity to apply for and receive a waiver from FERC for the “must purchase” requirement under certain conditions (P.L. 109-58; 119 Stat. 967-970; § 1253).

Regional Reliability Entities and NERC

Prior to the passage of the Energy Policy Act of 2005, regional reliability entities and the North American Electric Reliability Council operated in relative obscurity, creating voluntary reliability standards for the electric utility industry and consulting with Congress and FERC on reliability issues. The Act changed this, as reliability became a major issue after the blackout. No longer would reliability standards be voluntary; instead the reliability entities and NERC were supposed to work closely with FERC to establish mandatory reliability standards with associated punishments for violations (P.L. 109-58; 119 Stat. 941- 946; §1211; §215). Additionally, the Act created an ERO to create and enforce the mandatory standards, and NERC applied to FERC and received the designation as the ERO (Federal Energy Regulatory Commission, 2014). In this role NERC creates the standards, which then FERC must approve; once approved NERC must enforce them, with FERC as a regulatory backstop.

Regional Transmission Organizations and Independent System Operators

Prior to the transition to wholesale markets, transmission decisions were made largely by the same utility that generated the electricity in the first place. However, wholesale market restructuring made this process far more complicated as transmission-based utilities became separate entities from the generators that supplied the electricity. Such a bifurcation meant that someone had to manage day-to-day transmission access. Initially, FERC encouraged the development of what it called regional transmission groups (RTGs) for this purpose. However, it would appear that RTGs were replaced by independent system operators (ISOs). FERC determined that ISOs did not have a large enough geographic reach to maximize efficiency. As a result, FERC adopted Order No. 2000, strongly suggesting that all utilities should join a regional transmission organization (RTOs) to maximize regional transmission efficiency (Federal Energy Regulatory Commission, 2000p). Congress evidently agreed with the need for RTOs and ISOs,

including a provision in the Energy Policy Act of 2005 to encourage their further development (P.L. 109-58; 119 Stat. 955-960; §§1231-1233).

Other State and Federal Agencies

Throughout its history FERC has had difficulties creating and maintaining productive relationships with other state and federal agencies. FERC, due in part to its statutory mission, often finds itself in conflict with other agencies. Such conflict is likely to continue, since the Commission must help enforce reliability standards for transmission systems.²⁰⁶

Exempt Wholesale and Other Stand-Alone Generators

Exempt wholesale and other stand-alone generators existed because of the transition to competitive wholesale electricity markets. The Energy Policy Act's repeal of PUHCA might have meant that stand-alone generators no longer had to receive a waiver from being classified as utilities. Yet, it was less clear what the Act would mean for such facilities over the long term. The Act was not designed to roll back wholesale competition, but to prevent some of the problems arising from the initial attempts at producing such competition. In this process FERC was supposed to help enforce mandatory reliability standards to prevent blackouts, ensure transmission siting and access to allow for wholesale competition, and prevent and punish market abuses like those that resulted in the California electricity crisis (P.L. 109-58; 119 Stat. 601-602; Title XII-Electricity). There clearly seemed to be a future for wholesale generators but what that future would be remained ambiguous as some states suspended market competition, lessening but not eliminating the need for such generators.²⁰⁷

Patterns

Performance

As problems began to develop with wholesale market restructuring, the average performance of private electric utilities throughout the country declined. Evidence appeared in increases in the average national nominal retail electricity rates beginning in 2000, corresponding

²⁰⁶ For example, such standards include vegetation management requirements; trees and other greenery must be kept a certain distance from transmission lines to avoid the potential for a power outage. One could anticipate conflicts with the U.S. Forest Service, other federal agencies, and state environmental agencies over the need and how far to cut back such greenery.

²⁰⁷ In the immediate aftermath of the Act's passage, much of the construction seemed to be occurring among the utilities themselves, suggesting that they saw greater benefits than the stand-alone generators did.

with the start of the California electricity crisis (Table 4; U.S. Energy Information Administration, 2012). Signs that FERC might be able to turn the situation around were the decreases in both real and nominal rates in 2002. The situation took another turn for the worse after the Northeast blackout, and never really seemed to recover as nominal rates increased every year since (U.S. Energy Information Administration, 2012).

Relatedly, the debt-to-equity ratios for private electric utilities (Table 28) began to decline in 2000 (U.S. Energy Information Administration, 2002, p. 35), and net operating incomes for utilities experienced a major drop (Table 29; U.S. Energy Information Administration, 2011, p. 68). Although net operating incomes rebounded in 2001, they gradually decreased through 2006 (p. 68). Finally, there was also a substantial decline in the percentage of utilities with an A- or better bond rating between 1995 and 2007 (Table 30; McDermott, 2012, p. 20; Congressional Research Service, 1991, p. 77; U.S. Energy Information Administration, 1991, p. 590; 1996b, p. 555).

Congressional Response

Congress became concerned with the problems associated with the transition to competitive wholesale markets even before the California electricity crisis occurred. Although Congress seemed gridlocked over how to address the difficulties, the number of bills referencing FERC spiked in 2001 in response to the California debacle. In 2002 retail rates began to decline, and the number of bills decreased as well. However, the amount of legislation moved upward the following year in part in response to the Northeast blackout of 2003. Finally, the Energy Policy Act of 2005 became law in 2005.

FERC Reaction

FERC's initial response to the complexity of transitioning to competitive wholesale markets was to issue nearly twice as many formal decisions in 2000 for electric utilities as it had in 1994. At the same time, the Agency began to see potential problems arising from wholesale markets, and on several occasions officials testified before Congress asking for statutory changes designed to clarify and change elements of restructuring. Over time, the Commission evidently was able to get the attention of some lawmakers, resulting in the introduction of more bills and more hearings. However, Congress did not act for many years, leaving FERC to do what it could to prevent problems.

The transition also blurred the regulatory boundaries between the federal and state governments. At first, the Commission exercised “comity,” deferring to the states when jurisdiction overlapped and the states had legitimate claims to exercise jurisdiction in particular cases. This approach put FERC into a reactive posture and in part explains its tardy response to the California electricity crisis. Once the Agency did react to the crisis, it did so by issuing fewer industry-wide orders and opinions in 2001 and more formal decisions, many of which targeted problems in California. As FERC worked to end the crisis, numerous congressional hearings blamed the Agency for reacting so slowly.

It appeared that the Commission was helping improve overall conditions for utilities when the Northeast blackout happened. Once again FERC asked Congress for legislation addressing the difficulties with restructuring that created higher rates and reliability problems. The Energy Policy Act of 2005 gave FERC much of the authority it had requested. FERC took its new charge seriously and substantially increased the number of industry-wide orders in 2005 and 2006 as it implemented the new Act’s provisions.

Conclusion

The Energy Policy Act of 1992 included provisions designed to further encourage the development of wholesale electricity competition, premised on the notion that doing so would lower rates and improve reliability. In the process legislators opened the door to problems for the electric utility industry because they did not address how the new system should be governed, resulting in higher rates and reliability troubles. This placed FERC in a nebulous situation where it had to figure how to make this new system work; in the process it chose to exercise comity with the states. FERC persistently asked Congress for new legislation to resolve many of the concerns related to wholesale competition. Such legislation was not forthcoming and did not occur until after the Midwest price spike, the California electricity crisis, and the Northeast blackout of 2003. By the time Congress did act, utilities throughout the country were in serious financial decline, FERC’s reputation had been seriously damaged, and many states chose not to transition to competitive wholesale markets.

Part of the problem may have been that none of the crises, aside from the financial decline of electric utilities, had a national impact. Instead, the crises were regional in nature, making it less likely that Congress would act than if the crises had been national. Much of the country seemed insulated from these difficulties due to the regional characteristics of the grid

systems, making it less likely that legislators from unaffected areas would feel compelled to act. As a result, congressional action was thwarted as partisan, ideological, and regional differences overrode any sense that something needed to be done. A national crisis, such as stagflation in the 1970s, may well have pushed Congress to act sooner.

Unlike the era of stagflation and the perceived energy crisis of the Gulf War presented in chapters 5 and 6, many of the difficulties of the market restructuring period were defined by regional crises rather than at least a perceived national crisis. It was not until the mid-2000s that it became clear that the transition to wholesale competition was having a severe negative financial impact on electric utilities nationally, forcing Congress to finally act. In chapter 8, I will use the conceptual framework to explain how and why Congress and FERC reacted the way they did to periods of stability both for the electric utility industry and for the Agency and to explore how each institution acted in response to the different crises. Moreover, I will link the different periods of regulatory crisis together as each crisis and responses to them seemed to serve as a catalyst to the next.

Chapter 8

Conclusion

The primary purpose of this study was to explore whether, how, and why the Federal Energy Regulatory Commission changed its regulatory approach to private electric utilities between October 1, 1977 when it began operating and December 31, 2006, one year after Congress adopted the last major piece of private electric utility-related legislation. I contended that most of FERC's significant regulatory changes for electric utilities occurred after Congress responded to a crisis or a perceived crisis.²⁰⁸ Members of Congress generally preferred to avoid passing private electric utility-related legislation unless there was at least a perceived crisis; even when they acted, the legislation often involved procedural rather than comprehensive or substantive changes. Part of this response pattern was related to Congress's institutional structure, which limited and shaped how legislators responded to different policy areas. Other factors that influenced legislative (in)action were the complex and contentious nature of the private electric utility policy environment and the information asymmetry problems legislators confronted in such a setting. Meanwhile, FERC was constrained in its ability to regulate utilities by its own institutional structure, congressional actions, presidential appointments and oversight, federal court decisions, and the larger regulatory structure within which the Agency was embedded.

This chapter reviews the federal administrative changes that occurred absent at least a perceived crisis and those that resulted from at least a perceived crisis. It then highlights the processes of crisis response, examining the period of stagflation, the perceived energy crisis due to the first Gulf War, the period of crisis due to market restructuring problems and it summarizes how the elements of the conceptual framework fit together. The chapter ends by highlighting the contributions that the study makes to regulatory scholarship and suggests areas worthy of future research.

²⁰⁸ Instead of providing a general definition for a crisis in this study, I chose instead to highlight data points that suggest potentially the existence of an actual crisis for private electric utilities including higher retail electricity rates and oil prices, as well as deteriorating debt-to-equity ratios, net operating incomes, and bond ratings. However, I did not rely on just those data points; I also searched for the description of an event or a period of time as a crisis in academic literature and congressional documents. Such a description helps to identify both real crises and perceived crises that were the subject of this study, as it would appear that a crisis to some extent is in the eye of the beholder as perception seems to matter a great deal.

Administrative Changes in the Absence of Crisis

Activity at FERC

When no crisis was present FERC engaged mostly in incremental regulatory changes. These changes included administrative orders that made subtle alterations in procedures. Such alterations involved orders delegating more authority to office directors, administrative law judges, and other personnel at FERC. Moreover, the Agency sometimes issued orders in non-crisis periods that changed fees and charges placed for various administrative activities. Additionally, the Commission often changed either how forms had to be filed or the types of information requested.

At the same time, FERC handled cases brought before it where one party in the electric utility industry regulatory system challenged actions taken by another party, sometimes leading to the issuance of industry-wide opinions. Typically, in a period free of crisis, the number of such cases was small, and they generally involved questions about either transmission or wholesale rates.

During periods of relative calm, the Commission's formal decision docket focused most on rate cases of varying types, although the number and percentage of such cases decreased or stabilized compared to other decision types. The docket also included more merger and acquisition decisions, while the number and percentage of cases about the assumption of debt or issuance of securities remained stable. These periods also produced fewer electric utility-related decisions compared to other types of decisions FERC made. Moreover, more of the formal decisions were delegated to the office directors.

Congressional Activity

In periods of relative calm, legislators tended to introduce few bills directly referencing FERC and generally did not hold many hearings on matters related to private electric utilities. For utilities such times meant stable or improving debt-to-equity ratios, net operating incomes, and bond ratings. Members focused on the price of imported crude oil and the average national U.S. retail electricity rate as measures of how well or how poorly electric utilities performed. However, appropriations for FERC often did not reflect whether utilities or regulators confronted crises, though Congress appropriated more money for FERC when the Agency suffered from internal struggles.

Administrative Changes in Response to Crisis

Congressional Activity

Congressional activity began to increase at the first sign of a utility-related crisis. Committee and subcommittee chairs held hearings focused on the problems, and representatives from FERC often were called to testify. If the committee or sub-committee chair considered the problem to be significant, FERC commissioners appeared rather than lower level staff members. At the hearings individual legislators typically demanded immediate Commission action to remedy or mitigate the crisis.

As the crisis took hold members began to introduce legislation designed to fix whatever they perceived the problems to be; such legislation rarely passed and little was considered outside of a committee or subcommittee. Meanwhile, the number of bills introduced in both the House and Senate grew as the crisis reached its peak; the number of bills introduced to address a crisis appeared to be a lagging indicator of what had happened. It often took years before a consensus formed in Congress allowing for the passage of legislation designed to address a crisis.

Once a consensus was reached, members often passed legislation that made procedural changes either to FERC or to the regulatory system itself. Yet, the results also suggest that Congress was bolder in some of the changes it made in legislation adopted in 1978, 1992, and 2005.

FERC Activity

As a crisis commenced, FERC experienced a corresponding rise in the number and percentage of formal docketed electric utility-related cases; in particular this increase reflected rate decisions and formal filings where one actor in the regulatory environment challenged actions taken by another. In addition, administrative law judges or the Commission itself handled most of the decisions that resulted from the crisis. FERC had to wait for congressional action before issuing orders that fundamentally altered how the electric utility system operated or how the regulatory system worked. The Commission typically did not issue opinions addressing matters related to a crisis until a year or more after the crisis began. Although it is harder to document, FERC also could have responded to a crisis through informal decision making, which took place more quickly than formal decision making. However, these kinds of decisions were limited primarily to routine and uncontested matters, which the staff handled.

Immediately after Congress passed a new law expanding FERC's authority, the Agency could begin to act. It did so after the passage of PURPA, the Energy Policy Act of 1992, and the Energy Policy Act of 2005 by issuing orders over several years designed to implement provisions of the statutes. Years could be required to write such orders because of the complexity involved. Moreover, after the passage of PURPA and congressional complaints about electricity rates, the Agency began issuing orders to limit the use of construction and fuel clauses to allow utilities to charge higher wholesale electricity rates. Similarly, the passage of PURPA encouraged FERC to issue a number of orders changing the filing requirements for interlocking directorates.

Emboldened by expanding regulatory authority provided in statute and the crisis-induced need to act, FERC made other important regulatory changes. For example, in an effort to placate congressional complaints about the length of time it took for the Commission to respond to rate cases, FERC issued orders to create a more streamlined and quicker generic ratemaking process. It reacted to the California electricity crisis by issuing stricter accounting and financial reporting rules to deal with the financial malfeasance of companies like Enron. FERC responded to the terrorist attacks of September 11, 2001 by creating rules to limit who could gain access to sensitive energy information.

Processes of Crisis Response

This study examined all of the crises that took place between FERC's creation in 1977 and 2006. The process of congressional response to a crisis or perceived crisis served as a mechanism leading FERC to change comprehensively how it regulated private electric utilities. In the absence of a crisis and an associated statutory response, the Commission resorted to more incremental changes. FERC's approach of making small regulatory changes followed by a sudden burst of orders in reaction to legislation addressing a crisis resembled dynamics punctuated equilibrium theory examines. Also as expected, most of the orders FERC issued in response to legislation tended to occur within five or six years of the passage of a statute; even so, on occasion FERC issued orders that addressed matters relevant to legislation adopted a decade or more earlier.

Crises

The dynamics of FERC decision making varied to some extent by crisis. To review how this affected the Commission's decision making, I applied the elements of the conceptual framework to each case.

Stagflation. Stagflation, from 1977 to 1982, was both a constituency and a regulatory crisis, involving increasing electricity rates for consumers and regulatory problems for regulators. National in size, it had been occurring for about seven years by 1977 when Congress finally acted. Due to the type, size, and scope of the stagflation crisis, the period of stagflation served as a punctuating event forcing a legislative response. Its first step, as predicted by operating room politics, was to pass procedural changes in the Department of Energy Organization Act, which created the Energy Department and reorganized the FPC into FERC.

The Public Utility Regulatory Policies Act went beyond procedural changes, it was designed to make comprehensive changes both in the structure of private electric utilities and in how utilities were regulated to promote competition among wholesale electricity generators. The object of the statute was to move slowly from vertically integrated utility monopolies, which had difficulty operating in an economy permeated by stagflation, toward a more decentralized, less expensive to build, and environmentally friendlier approach to power generation through cogeneration and small power production. From a process theory perspective this new approach meant that legislators were no longer locked-in to existing regulatory arrangements. FERC reacted by issuing a number of orders to implement PURPA. Numerous opinions also related to rates more generally and the formal docket for office directors increased substantially as cogenerators and small power producers sought and received the qualifying facility status designation under PURPA.

Ultimately, the era of stagflation ended, resulting in a period of federal regulatory consolidation and the establishment of a new regulatory equilibrium late in the Reagan administration, marked by lower oil and electricity prices and a corresponding decline in the formal docketed decision case load of administrative law judges and the Commission.

Gulf War and the Energy "Crisis." For legislators the period of stagflation was traumatic, and they were on the lookout for the potential of another energy-driven economic crisis. In process theory terms, stagflation was an event that influenced future policy choices and outcomes. Many members of Congress were convinced that the Gulf War would produce higher prices and unemployment if they did not act; yet economic data suggested that at least for electric utilities

no economic crisis existed. Contrary to my expectations, Congress passed the Energy Policy Act of 1992 even after the threat of such a crisis had passed, and oil prices declined with the war's end in early 1991.

The Act built on many of the concepts contained in PURPA; in particular the 1992 legislation promoted even more competition among wholesale electricity generators. Comprehensive provisions in the statute sought to encourage the states to engage in wholesale electricity market restructuring, though it left it up to the states to decide whether they did so. States that opted for wholesale competition required utilities to divest either generation or transmission assets as the object was to do away with the old natural monopoly structure for private electric utilities; instead different companies would own the generation and transmission facilities. A majority of the states chose not to move to competitive wholesale electricity markets, evidently locked-in to the pre-existing utility system, much as process theory would suggest.

Transitioning to wholesale competition brought with it two elements that proved to be highly problematic. First, not only did state government officials decide if they wanted to restructure, but they also established many of the rules to be applied to the new wholesale markets. The latter point created many difficulties, particularly in California. Second, restructuring blurred the regulatory boundaries, creating underlap between the states and FERC. Initially FERC exercised comity, deferring to state regulatory choices; however, as regulatory failures and associated criticism of the Commission mounted, the Agency became more proactive and less deferential, much to the dismay of the restructured states.

Throughout the entire period FERC issued a number of orders to implement the Energy Policy Act and to encourage more states and utilities to participate in the emerging wholesale electricity marketplace. Although opinions related to the transition to wholesale competition did not increase significantly, the number of informal rate cases the Commission decided rose dramatically. Moreover, restructuring seemed to push more of FERC's formal decision making back to the Commission.

California Electricity Crisis and 2003 Northeast Blackout. By the late 1990s it was clear that something had gone terribly wrong with the transition to wholesale markets in the states that had chosen to do so. Members of Congress realized problems were developing; each year throughout the late 1990s, they steadily introduced more bills and held more hearings to try and

figure out what was going on and how to fix it. The California crisis and the 2003 blackout were in some ways symptomatic of some of the larger problems associated with the wholesale market transition. Contrary to expectations among legislators when they passed the Energy Policy Act of 1992, wholesale competition seemed to produce greater volatility in electric rates and more reliability problems.

Unfortunately for consumers and utilities alike, the California crisis and the blackout were regional crises limited to specific regions of the country, like the Midwest price spike before them; as the conceptual framework predicted, Congress did not act. These crises were at their roots regulatory in nature. Because of blurred regulatory boundaries, the transition to competitive wholesale electricity markets made accountability for problems more difficult to assign, though in hearings legislators tended to blame FERC for the restructuring failures. These also were constituency crises, affecting electricity rates and service for consumers. Of course, any legislative response to the crises probably would not have occurred at least until the mid-2000s as problems only became readily apparent in the late 1990s.

A punctuating event was required to overcome gridlock in Congress over how to resolve the crises and other problems associated with competition. Meanwhile, FERC had to act. It issued largely incremental orders at the industry level, designed to tighten existing rules on the transition to wholesale markets and accounting practices to address malfeasance by wholesale power marketers. Meanwhile, the Agency turned much of its focus to issuing company-specific orders to mitigate or resolve the problems occurring in the California market; as a result the size of the Commission's formal decision docket grew nearly exponentially. Opinions also grew as California utilities filed more challenges over their treatment by wholesale power marketers. To address the underlying causes of these crises, however, FERC needed Congress to act so the Agency could make comprehensive regulatory changes.

Coinciding with, and perhaps related to, the crises, the prices of both oil and electricity began to rise, sure signs that financial problem would follow for private electric utilities. By about 2003 nearly the entire private electric utility industry was in financial free fall as measured by deteriorating debt-to-equity ratios, declining net operating incomes, and collapsing bond ratings for most utilities. Now there was a national crisis Congress would have to respond to. To provide further impetus, the Northeast blackout happened at about the same time. Finally, in Congress passed the Energy Policy Act of 2005, expanding the Commission's authority in many

important ways. By the end of 2006 FERC had issued numerous industry-wide orders designed to implement various provisions in the Act, culminating in comprehensive regulatory changes. Once again punctuated equilibrium theory can help explain such sweeping regulatory changes. Meanwhile, consistent with process theory, states grew more reluctant to restructure, as the failures of the newer regulatory approach made overcoming lock-in to the pre-existing and seemingly more stable regulatory system nearly impossible.

Integrating Elements of the Conceptual Framework

Based upon the findings presented in this study, it was clear that Congress did not pass legislation addressing a crisis or a perceived crisis for private electric utilities unless the crisis was of a particular type (constituent), size (affecting most of the country), and scope (lasting for years). When a crisis pushed Congress to act, the crisis acted as a punctuating event (Baumgartner & Jones, 1993). Then, once a majority of members in Congress decided they needed to act and developed a consensus, their response(s) were constrained and informed by past public policy choices, failures, and successes consistent with concepts developed more fully in process theories, including path dependency (Langley, 2009; Pierson, 2000). Moreover, congressional action(s) were limited further by information asymmetry problems: legislators lacked the expertise to make competent decisions about how utilities should be regulated (Fremeth & Holburn, 2012). Operating room politics also was at play, limiting how members of Congress could act as the press frequently misrepresented the issues, citizens were factionalized, and legislators relied on bureaucrats to solve problems and receive most of the blame if things went wrong (Gormley, 1986). Within this context, legislators often introduced bills that either had no chance of passage or simply made procedural changes to the existing regulatory system (Gormley, 1986).

Despite the nature of the policy environment for utilities, Congress acted at times to address problems with the electric utility regulatory system. Consistent with punctuated equilibrium ideas (Baumgartner & Jones, 1993), a policy monopoly existed for private electric utility regulation prior to 1968; however, as chapter 3 reveals, the monopoly had declined dramatically. In response to economic, environmental, and technology problems Congress acted, ending the policy monopoly and allowed new organizations like the Environmental Protection Agency to regulate aspects of the utility business. As a result, Congress effectively -- whether by grand design or happenstance -- replaced the policy monopoly with a hybrid network (Hult &

Walcott, 1990) of competing actors and interests, some of whom acted as fire-alarms (McCubbins & Schwartz, 1984) for Congress. These competing organizations provided even greater opportunity for venue shopping than had previously existed (e.g., the president, federal courts, Congress, and the state governments; Baumgartner & Jones, 1993).

Congress and President Carter added FERC in response to the stagflation crisis. The findings here indicate that FERC like Congress was constrained in its ability to act; in the Agency's case, however, the source of many of those constraints could be traced back to legislative actions. In particular, FERC was created in a hybrid network where its powers could be checked by other governmental agencies, interests, and non-profit regulators, leading the Commission to often confront regulatory overlap and underlap (Volner, 1976). Perhaps it is not surprising then that FERC tended to make small incremental regulatory changes when a crisis was not evident. It seemed loathe to step on the regulatory toes of any of the other actors in the hybrid network, but tended to make much larger regulatory changes in reaction to a congressional response to a crisis, much as punctuated equilibrium would predict.

Ultimately, congressional reaction(s) to a crisis and FERC's subsequent responses to Congress produced a new federal regulatory equilibrium until another crisis occurred (Baumgartner & Jones, 1993).

Summary

FERC only made comprehensive regulatory changes for private electric utilities if Congress first passed legislation in response to a crisis or a perceived crisis. Otherwise, the Agency engaged in incremental regulatory changes. This is consistent with punctuated equilibrium theory: periods of stability were marked by incremental regulatory changes by FERC, while Congress tended to disengage from policy making for private electric utilities because of institutional design constraints, the complexity and contentiousness of the policy environment, and information asymmetry problems. At such times Congress also relied on fire-alarm oversight. During periods of crisis or perceived crisis, however, public pressure or the potential for such pressure compelled Congress to act.

Although Congress tended to make procedural changes even in response to a crisis, comprehensive regulatory changes in PURPA and the Energy Policy Acts of 1992 and 2005 suggest legislators will make comprehensive regulatory changes for private electric utilities when they believe they need to do so. Yet, it is important to recall that Congress debated many

of these changes for years. Moreover, consistent with operating room politics, crises tended to result in congressional hearings where members often placed much of the blame on FERC, even though the Agency's ability to regulate electric utilities was limited to wholesale and interstate matters.

Overall, it would appear that FERC did the best it could given the constraints placed upon it by Congress, the president, the federal courts, and other actors in the regulatory system in which the Agency was embedded. Like other organizations, the Commission suffered through periods of mismanagement and scandal, but it generally did a good job of responding to congressional desires with limited resources in a highly contentious policy environment.

Along the way, FERC engaged in a rolling decision making process with Congress in the aftermath of crises of particular types, sizes, and scopes. Past policy choices and outcomes shaped congressional actions and FERC's reactions. Positive results from past regulatory choices tended to reinforce adherence to particular regulatory approaches especially for the states, while failures like the California crisis encouraged some states to revert to more successful regulatory approaches. This resulted in ongoing variations among the states in the nature and extent of wholesale electricity competition. As a result, the Commission was forced to navigate two different regulatory approaches for private electric utilities.

Despite growing state opposition to wholesale competition because of its related regulatory failures, Congress continued to encourage FERC to develop mechanisms like Regional Transmission Organizations as a means of pushing more states and more utilities into wholesale electricity market competition. Moreover, the Energy Policy Act of 2005 created backstop authority for FERC to site transmission lines, issue mandatory reliability standards, and form a non-profit Electric Reliability Organization, all of which were deemed necessary to continue to push for wholesale electricity competition even as a majority of the states rejected it. This placed FERC in the predicament of wearing the black hat attempting to force the states and utilities to engage in activities they chose not to.

Contributions to Regulatory Scholarship

This study makes a number of contributions to existing scholarship on regulation. First, despite the importance of electricity, few other studies focus on federal regulation of private electric utilities over time and how it has changed. Much existing scholarship tends to focus on state-level regulation at particular points in time, but federal regulation arguably deserves more

attention, particularly in light of market restructuring. Additionally, this study focuses on the relationship between FERC and Congress. Scholars have explored the generic relationship between independent regulatory commissions and Congress. Here, by examining the relationship between FERC and Congress, I provide both specific information about one such relationship and the basis for comparison with other congressional-regulatory ties. Some of the findings presented in this case are likely applicable to other federal independent regulatory commissions and to other federal agencies, particularly those acting in policy environments characterized by operating room politics. However, FERC has had a distinctive love-hate relationship with Congress that has affected how the Agency has been treated by some legislators. This relationship has had an influence on legislation and the resulting regulatory authority the Commission has been given or in some cases had taken away by Congress over time. Finally, this work brings attention to an area of regulation where significant issues and problems exist. These concerns deserve serious debate, hopefully resulting in possible solutions.

Concluding Comments

It would be a mistake to conclude that the findings here are the final word on private electric utility regulation. The regulatory environment for utilities is highly dynamic and continues to change as utilities develop new technologies and alter their methods of operation. Moreover, each of the entities with regulatory jurisdiction over utilities adjusts regulatory approaches to the industry in ways that affect both regulatory and industry arrangements. The conceptual framework was designed to explain the regulatory changes made by FERC. Punctuated equilibrium and process theories with the inclusion of concepts like hybrid networks, operating room politics, and information asymmetry generally performed well. Unfortunately, it is much more difficult to develop frameworks that help describe and explain dynamics at the state regulatory and utility levels.

Future research might examine more explicitly the impact of different state public utility commissions and utilities on private electric utility regulation. Operating room politics is a useful concept and an update to it would be extremely beneficial. Another area where more research might be done is examining the role of the federal courts in shaping how and why FERC changed its regulatory approach to private electric utilities between 1977 and 2006. Among other research possibilities are reviewing the influence of different presidents on federal utility regulation and studying the variations among the states in the nature and extent of

wholesale electricity competition. More work also needs to be done to reveal the effects of non-profits like RTOs and NERC on regulatory outcomes for utilities.

Lastly, an attempt needs to be made to re-evaluate the regulatory system for private electric utilities, perhaps replacing the two existing arrangements with a new approach. The U.S. regulatory system for utilities is anything but straightforward or efficient, and it has been at least in part responsible for the ongoing financial decline of electric utilities throughout the country beginning in 2000. Additionally, it has placed FERC in a difficult position because it has limited the Agency's regulatory jurisdiction over private electric utilities in ways that are both inconsistent and unclear. What the new system should look like I am unsure about; yet I believe the existing systems should be replaced with something else. Without such changes we might wake up one day and find out that the lights will not come on.

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Appendix

Table 1. Regulatory Features of the Older and Newer Regulatory Systems

<u>Older System</u>		<u>Newer System</u>	
States Regulate:	Feds Regulate:	States Regulate:	Feds Regulate:
Intrastate Transmission	Wholesale Rates	Siting	Wholesale Rates
Siting	Interstate Transmission	Intrastate Transmission	Interstate Transmission
Service Standards	Refunds	Service Standards	Refunds
Retail Sales	Hydro Projects	Retail Sales	Hydro Projects
Retail Rates	Gas Pipelines	Retail Rates	Gas Pipelines
	Wholesale Sales	Retail Price Caps*	Wholesale Sales
			Retail Sales*
			Intrastate Transmission*
			Reliability Standards thru NERC*
			Transmission Siting for NIETCs*
			Non-Profit Regulation*
			Cogenerators & Small Power*
			Punitive Fine Authority*

Note. The boxes compare the features of the two differing approaches to regulating private investor-owned electric utilities. * features that have been added since 1968. The extent to which these elements describe state governments and private utilities varies over time.

Source: Griffin, J.M. & Puller, S.L. (2005). "A primer on electricity and the economics of deregulation." In J.M. Griffin & S.L. Puller (Eds.), *Electricity deregulation: choices and challenges* (pp. 1-28). Chicago: University of Chicago Press.

Table 2. Regional Reliability Councils

Council	Acronym	States
Northeast Power Coordinating Council	NPCC	Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, Vermont, and New York
ReliabilityFirst Corporation	RFC	Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Ohio, Indiana, Part of Wisconsin, Part of Michigan, Part of Illinois, Part of Kentucky, and Part of Virginia
SERC Reliability Corporation	SERC	Missouri, Alabama, Tennessee, North Carolina, South Carolina, Georgia, Mississippi, Part of Iowa, Part of Illinois, Part of Kentucky, Part of Virginia, Part of Oklahoma, Part of Arkansas, Part of Louisiana, Part of Texas, and Part of Florida
Midwest Reliability Organization	MRO	Minnesota, North Dakota, Nebraska, Part of Montana, Part of South Dakota, Part of Iowa, Part of Wisconsin, and the Upper Peninsula of Michigan
Southwest Power Pool	SPP	Kansas, Part of Oklahoma, Part of New Mexico, Part of Texas, Part of Louisiana, and Part of Arkansas
Electric Reliability Council of Texas	ERCOT	Part of Texas
Western Electricity Coordinating Council	WECC	Washington, Oregon, California, Idaho, Nevada, Utah, Colorado, Wyoming, Part of Montana, Part of South Dakota, Part of New Mexico, and Part of Texas
Alaska Systems Coordinating Council	ASCC	Part of Alaska
Florida Reliability Coordinating Council	FRCC	Part of Florida

Source: North American Electric Reliability Corporation. (2011). "Key players: Regional entities." Retrieved February 13, 2011, from <http://www.nerc.com/page.php?cid=191119>.

Table 3. States Identified as Members of the National Interest Electric Transmission Corridors by the U. S. Department of Energy

States	Counties	States	Counties	States	Counties	States	Counties
Arizona	La Paz	New York (Continued)	Lewis	Pennsylvania (Continued)	Clinton	Virginia (Continued)	City of Alexandria
	Maricopa		Livingston		Columbia		City of Harrisonburg
	Yuma		Madison		Cumberland		City of Fairfax
California	Imperial		Monroe		Dauphin		City of Falls Church
	Kern		Montgomery		Delaware		City of Manassas
	Los Angeles		Nassau		Fayette		City of Manassas Park
	Orange		New York		Franklin	City of Winchester	
	Riverside		Niagara		Fulton	Washington, D. C.	ALL
	San Bernardino		Oneida		Greene	Barbour	
San Diego	Onondaga		Huntingdon		Berkeley		
Delaware	ALL		Ontario		Boone		
Maryland	Allegany		Orange		Jefferson	Braxton	
	Anne Arundel		Orleans		Junata	Brooke	
	Baltimore		Otsego		Lackawanna	Calhoun	
	Calvert		Putnam		Lancaster	Clay	
	Caroline	Queens	Lebanon	Doddridge			
	Carroll	Rensselaer	Lehigh	Gilmer			
	Cecil	Richmond	Luzerne	Grant			
	Charles	Rockland	Mifflin	Hampshire			
	Dorchester	St. Lawrence	Monroe	Hancock			
	Frederick	Saratoga	Montgomery	Hardy			
	Garrett	Schenectady	Montour	Harrison			
	Harford	Schoharie	Northampton	Jackson			
	Howard	Seneca	Northumberland	Jefferson			
	Kent	Suffolk	Perry	Kanawha			
	Montgomery	Sullivan	Philadelphia	Lewis			
	Prince George's	Ulster	Pike	Marion			
	Queen Anne's	Wayne	Schuykill	Marshall			
	St. Mary's	Westchester	Snyder	Mason			
	Talbot	Wyoming	Somerset	Mineral			
	Washington	Belmont	Susquehanna	Monongalia			
Wicomico	Carroll	Union	Morgan				
Worcester	Columbiana	Wayne	Nicholas				
City of Baltimore	Harrison	Washington	Ohio				
New Jersey	ALL	Jefferson	Westmoreland	Pendleton			
New York	Albany	Monroe	Wyoming	Pleasants			
	Bronx	Stark	York	Pocahontas			
	Broome	Adams	Arlington	Preston			
	Cayuga	Allegheny	Clarke	Putnam			
	Chenango	Armstrong	Cupeper	Randolph			
	Clinton	Beaver	Fairfax	Ritchie			
	Columbia	Bedford	Fauquier	Roane			
	Delaware	Berks	Frederick	Taylor			
	Dutchess	Blair	Loudon	Tucker			
	Erie	Bradford	Madison	Tyler			
	Franklin	Bucks	Page	Upshur			
	Fulton	Butler	Prince William	Webster			
	Genesee	Cambria	Rappahannock	Wetzel			
	Greene	Carbon	Rockingham	Wirt			
	Herkimer	Centre	Shenandoah	Wood			
	Jefferson	Chester	Stafford				
	Kings	Clearfield	Warren				

Source: United States Department of Energy. (2007). "List of counties and cities included in the designated corridors." *National electric transmission corridor report and the ordered national corridor designations*. Retrieved April 26, 2009, from <http://nietc.anl.gov/nationalcorridor/index.cfm>.

Table 4. Average U.S. Electricity Retail Rates in Average Price (Cents) Per Kilowatt Hour

Year	Residential		Commercial		Industrial		Transportation		Other		Total	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
1960	2.6	14	2.4	12.9	1.1	5.9	NA	NA	1.9	10.2	1.8	9.7
1961	2.6	13.8	2.4	12.8	1.1	5.8	NA	NA	1.8	9.6	1.8	9.6
1962	2.6	13.6	2.4	12.6	1.1	5.8	NA	NA	1.9	10	1.8	9.4
1963	2.5	13	2.3	11.9	1	5.2	NA	NA	1.8	9.3	1.8	9.3
1964	2.5	12.8	2.2	11.2	1	5.1	NA	NA	1.8	9.2	1.7	8.7
1965	2.4	12	2.2	11	1	5	NA	NA	1.8	9	1.7	8.5
1966	2.3	11.2	2.1	10.2	1	4.9	NA	NA	1.8	8.8	1.7	8.3
1967	2.3	10.9	2.1	9.9	1	4.7	NA	NA	1.8	8.5	1.7	8.0
1968	2.3	10.4	2.1	9.5	1	4.5	NA	NA	1.8	8.2	1.6	7.3
1969	2.2	9.5	2.1	9.1	1	4.3	NA	NA	1.7	7.4	1.6	6.9
1970	2.2	9	2.1	8.6	1	4.1	NA	NA	1.8	7.4	1.7	7
1971	2.3	9	2.2	8.6	1.1	4.3	NA	NA	1.9	7.4	1.8	7
1972	2.4	9	2.3	8.6	1.2	4.5	NA	NA	2	7.5	1.9	7.1
1973	2.5	8.9	2.4	8.5	1.3	4.6	NA	NA	2.1	7.5	2	7.1
1974	3.1	10.1	3	9.8	1.7	5.5	NA	NA	2.8	9.1	2.5	8.2
1975	3.5	10.4	3.5	10.4	2.1	6.3	NA	NA	3.1	9.2	2.9	8.6
1976	3.7	10.4	3.7	10.4	2.2	6.2	NA	NA	3.3	9.3	3.1	8.7
1977	4.1	10.9	4.1	10.9	2.5	6.6	NA	NA	3.5	9.3	3.4	9
1978	4.3	10.6	4.4	10.9	2.8	6.9	NA	NA	3.6	8.9	3.7	9.2
1979	4.6	10.5	4.7	10.7	3.1	7.1	NA	NA	4	9.1	4	9.1
1980	5.4	11.3	5.5	11.5	3.7	7.7	NA	NA	4.8	10	4.7	9.8
1981	6.2	11.9	6.3	12.1	4.3	8.2	NA	NA	5.3	10.1	5.5	10.5
1982	6.9	12.4	6.9	12.4	5	9	NA	NA	5.9	10.6	6.1	11
1983	7.2	12.5	7	12.1	5	8.7	NA	NA	6.4	11.1	6.3	10.9
1984	7.15	11.95	7.13	11.92	4.83	8.07	NA	NA	5.9	9.86	6.25	10.45
1985	7.39	11.99	7.27	11.8	4.97	8.06	NA	NA	6.09	9.88	6.44	10.45
1986	7.42	11.78	7.2	11.43	4.93	7.83	NA	NA	6.11	9.7	6.44	10.22
1987	7.45	11.49	7.08	10.92	4.77	7.36	NA	NA	6.21	9.58	6.37	9.83
1988	7.48	11.16	7.04	10.5	4.7	7.01	NA	NA	6.2	9.25	6.35	9.47
1989	7.65	11	7.2	10.35	4.72	6.78	NA	NA	6.25	8.98	6.45	9.27
1990	7.83	10.84	7.34	10.16	4.74	6.56	NA	NA	6.4	8.86	6.57	9.09
1991	8.04	10.75	7.53	10.06	4.83	6.46	NA	NA	6.51	8.7	6.75	9.02
1992	8.21	10.72	7.66	10	4.83	6.31	NA	NA	6.74	8.8	6.82	8.9
1993	8.32	10.63	7.74	9.89	4.85	6.19	NA	NA	6.88	8.79	6.93	8.85
1994	8.38	10.48	7.73	9.67	4.77	5.97	NA	NA	6.84	8.56	6.91	8.64
1995	8.4	10.29	7.69	9.42	4.66	5.71	NA	NA	6.88	8.43	6.89	8.44
1996	8.36	10.05	7.64	9.19	4.6	5.53	NA	NA	6.91	8.31	6.86	8.25
1997	8.43	9.96	7.59	8.97	4.53	5.35	NA	NA	6.91	8.17	6.85	8.09
1998	8.26	9.65	7.41	8.66	4.48	5.23	NA	NA	6.63	7.75	6.74	7.88
1999	8.16	9.4	7.26	8.36	4.43	5.1	NA	NA	6.35	7.31	6.64	7.65
2000	8.24	9.29	7.43	8.37	4.64	5.23	NA	NA	6.56	7.39	6.81	7.68
2001	8.58	9.46	7.92	8.73	5.05	5.57	NA	NA	7.2	7.94	7.29	8.04
2002	8.44	9.15	7.89	8.56	4.88	5.29	NA	NA	6.75	7.32	7.2	7.81
2003	8.72	9.26	8.03	8.53	5.11	5.43	7.54	8.01	--	--	7.44	7.9
2004	8.95	9.25	8.17	8.44	5.25	5.42	7.18	7.42	--	--	7.61	7.86
2005	9.45	9.45	8.67	8.67	5.73	5.73	8.57	8.57	--	--	8.14	8.14
2006	10.4	10.07	9.46	9.16	6.16	5.97	9.54	9.24	--	--	8.9	8.62
2007	10.65	10.03	9.65	9.08	6.39	6.02	9.7	9.13	--	--	9.13	8.59
2008	11.26	10.37	10.36	9.54	6.83	6.29	10.74	9.89	--	--	9.74	8.97
2009	11.51	10.49	10.17	9.27	6.81	6.21	10.65	9.71	--	--	9.82	8.95
2010	11.54	10.4	10.19	9.18	6.77	6.1	10.57	9.52	--	--	9.83	8.86
2011	11.8	10.41	10.32	9.1	6.89	6.08	10.58	9.33	--	--	9.99	8.81

Source: U.S. Energy Information Administration. (2014). "Annual energy review." *Total energy*. Retrieved February 23, 2013, from <http://www.eia.gov/totalenergy/data/annual/showtext.cfm?r=ptb0810>.

The table includes the average retail electricity rates in the U.S. for Residential, Commercial, Industrial, Transportation, Other and Total Consumers in nominal and real prices from 1960 to 2011. Nominal prices reflect the price actually paid when the electricity was purchased. Real prices reflect the price of electricity adjusted for inflation.

Table 5. Department of Energy Organization Act: Provisions related to Federal Energy Regulatory Commission

Legislation Name	Year	Title	Section	Subsection	What Section Did
Department of Energy Organization Act	1977	II	204		Established FERC
(P.L. 95-91; 91 Stat. 565-613)					Commissioners must demonstrate ability, background, training, and experience in energy policy
		IV	401	(b)	Five members appointed by President Must be approved by Senate Four Year Terms Chair picked by President President can Remove Commissioners for Inefficiency, Neglect of Duty, or Malfeasance Only Three Can be From the Same Political Party Commissioner until Term Expires or Successor has Taken Office Must avoid Conflicts of Interest
				(c)	Commission Chair Responsible for Hiring Hearing Examiners, Compensation for Staff, Staff Supervision, Distribution of Work, and Service Procurement
				(e)	Chair may Designate Acting Chair Three Commissioners for a Quorum Each Commissioner has One Vote Majority Rules
				(f)	Commission can Issue Rules and Regulations as Necessary in the Performance of their Duties
				(g)	Can Hold Hearings, Issue Subpoenas, Administer Oaths, Examine Witnesses, and Receive Evidence
			402	(a)	Transfers to FERC Part I of FPA Transfers to FERC Part II of FPA Transfers to FERC Mergers and Acquisitions Transfers to FERC Part III of FPA
				(d)	Can Hold Hearings on Matters Arising under Secretary of Energy
				(e)	Secretary May Assign Matters to FERC
				(f)	Export or Import of Electricity Only Under FERC Jurisdiction if Assigned by Secretary
				(h)	Can Issue Rules and Regulations
			403		Rulemaking Procedures
			404		Secretary Rulemaking Referrals to FERC
			405		Secretary Can Intervene in FERC Proceedings
			406		FERC Independent Regulatory Commission
			407		FERC can Request Information from Secretary
		V	501		Administrative Procedures
			502		Judicial Review
		VI			Conflict of Interest Requirements
			649		Use of Facilities

Source: Department of Energy Organization Act of 1977 (P.L. 95-91; 91 Stat. 565)

Table 6. Market Restructuring and Politics, by State

<u>Year</u>	<u>State (Order in which restructured)</u>	<u>Citizen Ideology* (Conservative Rank)</u>	<u>Government Ideology** (Conservative Rank)</u>	<u>Partisan ID</u>	<u>State Legislature</u>	<u>Partisan ID</u>	<u>Governor</u>	<u>Year Suspended</u>	<u>Elected PUC</u>	<u>Price (Rank by State Retail Rates)</u>
1995	Texas (1)	35.2676 #13	32.402 #22	Senate 17 Democrats House 87 Democrats	14 Republicans 63 Republicans	George W. Bush Republican	N/A	No	\$6.10 c/kwH #30	
1996	New Hampshire (2)	30.3359 #6	1.25 #1	Senate 6 Democrats House 110 Democrats	18 Republicans 282 Republicans	Stephen Merrill Republican	N/A	No	\$11.59 c/kwH #2	
	Rhode Island (3)	67.1897 #47	62.4167 #41	Senate 40 Democrats House 84 Democrats	10 Republicans 16 Republicans	Lincoln Almond Republican	N/A	No	\$10.48 c/kwH #6	
	California (4)	50.2965 #36	31.4809 #23	Senate 21 Democrats House 39 Democrats	17 Republicans 41 Republicans	Pete Wilson Republican	2001	No	\$ 9.48 c/kwH #10	
	Pennsylvania (5)	49.2701 #34	25.4526 #17	Senate 21 Democrats House 100 Democrats	27 Republicans 102 Republicans	Tom Ridge Republican	N/A	No	\$ 7.96 c/kwH #12	
1997	Montana (6)	27.879 #5	10.5 #7	Senate 16 Democrats House 35 Democrats	33 Republicans 65 Republicans	Marc Racicot Republican	2002	Yes	\$ 5.20 c/kwH #43	
	Maine (7)	71.1714 #48	77.4829 #45	Senate 19 Democrats House 81 Democrats	15 Republicans 69 Republicans	Angus S. King Independent	N/A	No	\$ 9.51 c/kwH #11	
	Nevada (8)	32.0978 #9	52.5149 #34	Senate 9 Democrats House 25 Democrats	12 Republicans 17 Republicans	Bob Miller Democrat	2001	No	\$ 5.60 c/kwH #35	
	Massachusetts (9)	86.1885 #50	80.3847 #46	Senate 31 Democrats House 130 Democrats	8 Republicans 29 Republicans	Argeo Paul Cellucci Republican	N/A	No	\$ 10.48 c/kwH #7	
	New York (10)	69.1157 #46	50.7273 #32	Senate 26 Democrats House 95 Democrats	35 Republicans 52 Republicans	George Pataki Republican	N/A	No	\$ 11.13 c/kwH #3	
	Illinois (11)	59.9341 #41	36.6811 #21	Senate 28 Democrats House 60 Democrats	31 Republicans 58 Republicans	Jim Edgar Republican	N/A	No	\$ 7.71 c/kwH #13	
1998	Virginia (12)	43.5919 #22	26.2929 #14	Senate 19 Democrats House 51 Democrats	21 Republicans 48 Republicans	James S. Gilmore Republican	2007	No	\$ 5.88 c/kwH #30	
	Arizona (13)	43.5327 #21	5.64286 #5	Senate 12 Democrats House 22 Democrats	18 Republicans 38 Republicans	Jane Dee Hull Republican	2002	Yes	\$ 7.33 c/kwH #14	
	Connecticut (14)	72.0586 #46	65.9657 #32	Senate 19 Democrats House 96 Democrats	17 Republicans 55 Republicans	John G. Rowland Republican	N/A	No	\$ 10.30 c/kwH #4	

Table 6 Continues on to the Next Page

1999	New Jersey (15)	67.9235 #43	37.1667 #20	Senate 16 Democrats House 32 Democrats	24 Republicans 48 Republicans	Christine Todd Whitman Republican	N/A	No	\$ 9.98 c/kwH #4
	Delaware (16)	57.7261 #37	74.8125 #43	Senate 13 Democrats House 15 Democrats	8 Republicans 26 Republicans	Thomas Carper Democrat	N/A	No	\$ 7.10 c/kwH #14
	Arkansas (17)	46.3154 #17	45.25 #24	Senate 29 Democrats House 74 Democrats	6 Republicans 23 Republicans	Mike Huckabee Republican	2003	No	\$ 5.83 c/kwH #33
	New Mexico (18)	51.037 #27	50.0944 #28	Senate 25 Democrats House 40 Democrats	17 Republicans 30 Republicans	Gary E. Johnson Republican	2001	Yes	\$ 6.57 c/kwH #19
	Maryland (19)	70.6431 #46	94.5833 #50	Senate 32 Democrats House 106 Democrats	15 Republicans 35 Republicans	Parris N. Glendening Democrat	N/A	No	\$ 7.04 c/kwH #15
	Ohio (20)	51.5435 #30	16.4537 #9	Senate 12 Democrats House 39 Democrats	21 Republicans 59 Republicans	Bob Taft Republican	N/A	No	\$ 6.40 c/kwH #21
	Oregon (21)	58.5047 #39	57.5609 #34	Senate 13 Democrats House 25 Democrats	17 Republicans 35 Republicans	John Kitzhaber Democrat	N/A	No	\$ 4.83 c/kwH #45
2000	Michigan (22)	53.0615 #38	14.6924 #14	Senate 15 Democrats House 52 Democrats	23 Republicans 58 Republicans	John Engler Republican	N/A	No	\$ 7.11 c/kwH #14

Note. The year identifies the year in which a state passed legislation to restructure its private electric utility market. *Citizen and state **Government ideology were measured by Berry, Rungquist, Fording, & Hansen (1998) in "Measuring citizen and government ideology in the American states, 1960-93." *American Journal of Political Science*, 42(1), 327-348. The authors used interest group ratings for legislators in Congress and the percentage of the vote each major political party candidate received in an election to produce *citizen ideology scores for a state. To create state **government ideology scores the authors used interest group ratings for members of Congress to estimate the ideology of state legislators and governors. Their citizen and government ideology scores can be found at the website listed in the sources below.

Sources:

- Berry, W. D., Rungquist, E. J., Fording, R. C., & Hanson, R. L. (2007). "Replication data for: Measuring citizen and government ideology in the American states, 1960-93." Retrieved from <http://hdl.handle.net/1902.1/10570> UNF:3:058RA2kgCzZ+vInr+Q7arPA== Richard C. Fording [Distributor] V1 [Version].
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- National Association of Regulatory Utility Commissioners. (2011). "State Commissions 2010." *Regulatory Commissions*. Retrieved February 5, 2011, from <http://www.naruc.org/commissions.cfm>.
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- U.S. Energy Information Administration. (2009). "Status of electricity restructuring by state." *Electricity*. Washington, D.C.: Retrieved July 26, 2010, from http://www.eia.doe.gov/cneaf/electricity/page/restructuring/restructure_elect.html.
- U.S. Energy Information Administration. (2010). *Average Retail Price of Electricity to Ultimate Customers: By State, by Provider, Annual Back to 1990 (Form EIA-861)*. Washington, D.C.: Retrieved November 26, 2011, from <http://www.eia.gov/electricity/data.cfm#sales>.

Table 7. Statutes Mentioned in Chapter 3

<u>Name</u>	<u>Year</u>	<u>Public Law; Statute Numbers</u>
Federal Water Power Act of 1920	1920	(P.L. 66-280; 41 Stat. 1063)
Reorganizing the Federal Power Commission (FPC)	1930	(P.L. 71-412; 46 Stat. 797)
The Public Utility Act of 1935	1935	(P.L. 74-333; 49 Stat. 803)
Natural Gas Act of 1938	1938	(P.L. 75-688; 52 Stat. 821)
Reorganization Plan No. 9 of 1950	1950	(P.L. 81-920; 64 Stat. 1265)
Transmission of electricity from or to one state across an international border	1953	(P.L. 83-210; 67 Stat. 461)
Amended court action in the Federal Power Act	1958	(P.L. 85-791; 72 Stat. 947)
Commissioner succession amendments	1960	(P.L. 86-619; 74 Stat. 407)
Horsepower amendments for hydroelectric projects	1962	(P.L. 87-647; 76 Stat. 447)
National Environmental Protection Act	1970	(P.L. 91-190; 83 Stat. 852)
Immunity amendment under the Federal Power Act	1970	(P.L. 91-452; 84 Stat. 929)
The Clean Air Act	1970	(P.L. 91-604; 84 Stat. 1676)
The Clean Water Act	1972	(P.L. 92-500; 86 Stat. 816)
Encouraging electric power generating facilities to convert to coal as a fuel source	1974	(P.L. 93-319; 88 Stat. 246)
Department of Energy Organization Act	1977	(P.L. 95-91; 91 Stat. 565)
Public Utility Regulatory Policies Act (PURPA)	1978	(P.L. 95-617; 92 Stat. 3117)
Energy Tax Act	1978	(P.L. 95-618; 92 Stat. 3174)
National Energy Conservation Policy Act	1978	(P.L. 95-619; 92 Stat. 3206)
Power Plant and Industrial Fuel Use Act	1978	(P.L. 95-620; 92 Stat. 3289)
Natural Gas Policy Act	1978	(P.L. 95-621; 92 Stat. 3351)
Federal Power Act Amendment	1980	(P.L. 96-294; 94 Stat. 718)
Electric Consumers Protection Act	1986	(P.L. 99-495; 100 Stat. 1243)
Federal Power Act Amendment	1986	(P.L. 99-546; 100 Stat. 3056)
FERC Appropriation	1987	(P.L. 100-202; 101 Stat. 1329-126)
Federal Power Act Amendment	1988	(P.L. 100-473; 102 Stat. 2299)
Natural Gas Wellhead Decontrol Act	1989	(P.L. 101-60; 103 Stat. 157)
Department of Energy Organization Act Amendment	1990	(P.L. 101-271; 104 Stat. 135)
PURPA Amendment	1990	(P.L. 101-575; 104 Stat. 2834)
Energy Policy Act	1992	(P.L. 102-486; 106 Stat. 2776)
Energy Policy Act	2005	(P.L. 109-58; 119 Stat. 594)
Energy Independence and Security Act	2007	(P.L. 110-140; 121 Stat. 1492)

Table 8. Executive Orders Mentioned in Chapter 3

<u>Executive Order Description</u>	<u>President</u>	<u>Date</u>	<u>Number</u>
Required the FPC to engage in emergency preparedness preparations	John Kennedy	February 26, 1963	11095
Restructured the emergency preparedness process for the Federal Power Commission	Richard Nixon	October 28, 1969	11490
Created the Environmental Protection Agency (EPA), known as Reorganization Plan Number 3	Richard Nixon	1970	(35 F.R. 15623, 84 Stat. 2086)
Transferred Authority to FERC	Jimmy Carter	September 13, 1977	12009

Table 9. U.S. Supreme Court Cases Mentioned in Chapter 3

<u>Case Name</u>	<u>Citation</u>	<u>Year Decided</u>
<i>Munn v. Illinois</i>	94 U.S. 113	1877
<i>Smith v. Ames</i>	169 U.S. 466	1898
<i>Rhode Island PUC v. Attleboro</i>	273 U.S. 83	1927
<i>Tennessee Electric Power Co. v. Tennessee Valley Authority</i>	306 U.S. 118	1939
<i>Federal Power Commission v. Hope Natural Gas Company</i>	320 U.S. 591	1944
<i>Otter Tail Power Company v. United States</i>	410 U.S. 366	1973
<i>Federal Power Commission v. Conway Corporation</i>	426 U.S. 271	1976
<i>The Narragansett Electric Company v. Edward F. Burke et al.</i>	435 U.S. 972	1978
<i>Federal Energy Regulatory Commission v. Mississippi</i>	456 U.S. 742	1982
<i>American Paper Institute v. American Electric Power Service Corporation</i>	461 U.S. 402	1983
<i>Nantahala Power & Light Company v. Thornburg</i>	476 U.S. 953	1986
<i>Mississippi Power & Light Company v. Mississippi</i>	487 U.S. 354	1988
<i>California v. FERC</i>	495 U.S. 490	1990
<i>Arcadia, Ohio, et al., Petitioners v. Ohio Power Company et al.</i>	498 U.S. 73	1990
<i>New York v. FERC</i>	535 U.S. 1	2002
<i>Entergy Louisiana, Incorporated v. Louisiana Public Service Commission</i>	539 U.S. 39	2003
<i>Morgan Stanley Capital Group Inc. v. Public Utility District No. 1 of Snohomish County, Washington</i>	554 U.S.	2008

Note: Cases listed by the U.S. Energy Information Administration in 2000 as the most important cases affecting the U.S Electric Power Industry; I added more recent cases that applied directly to FERC and private electric utilities.

Source: U.S. Energy Information Administration (EIA). (2000). *The changing structure of the electric power industry 2000: An update*. (DOE/EIA-0562(00)). Washington, D.C.: Retrieved from http://www.eia.gov/cneaf/electricity/chg_update/update2000.pdf.

Table 10. Federal Water Power Act of 1920, by Section

Legislation Name	Year	Section	Regulatory Changes
Federal Water Power Act	1920	1	Creates FPC and Structure
		2	Office Details and Expenses
		3	Word Definitions
		4	Commission Powers
		5	Preliminary Permits
		6	Licenses
		7	Preferences to States and Municipalities
		8	Transfer of Licenses
		9	Application Requirements
		10	License Conditions
		11	Dams and Navigable Waters
		12	Construction of Locks on Navigable Waters
		13	Time Limit for Construction and Operation
		14	Expiration of License and Government Takeover
		15	New License to Original Licensee
		16	Government Possession in Emergency
		17	Proceeds from Indian Lands
		18	Navigation Facilities Regulated By Sec. of War
		19	Public Service License
		20	Reasonable Rates in Commerce
		21	Eminent Domain for Project Sites
		22	Service Beyond Term of License
		23	Existing Rights Protected
		24	Lands Reserved for Entry
		25	Penalty for Violations
		26	License Revocations
		27	Irrigation Laws Not Affected
		28	Amendments to Licenses
		29	Inconsistent Laws Repealed
		30	Title

Source: Federal Water Power Act (P.L. 66-280; 41 Stat. 1063)

Table 11. Federal Power Act 1935 by Section

Legislation Name	Year	Section	Regulatory Changes
Public Utility Act Title II Federal Power Act Part I - Amendments FWPA	1935	3 (Bill Section 201)	FWPA - Definition of Commission and Commissioner
		4 (Bill Section 202)	FWPA - Commission Authorized and Empowered Collect and Record Data - Original Cost and Net Investment
		5 (Bill Section 203)	FWPA - adds "or for good cause shown after notice and opportunity for hearing" in last sentence
		6 (Bill Section 204)	FWPA - Changes Number of Days Public Notice
		7 (Bill Section 205)	FWPA - Deletes "navigation and" Paragraphs are Labeled (a) and (b) and other changes
		10 (Bill Section 206)	FWPA - Language Changes
		14 (Bill Section 207)	FWPA - Adds "the Commission after notice and opportunity for hearing" and "nor shall"
		17 (Bill Section 208)	FWPA - Language Changes to Charges Arising from Licenses
		18 (Bill Section 209)	FWPA - "Commission shall require the construction, maintenance, and operation of such lights and signals as prescribed by the Secretaries of War and Commerce"
		23 (Bill Section 210)	FWPA - Adds Language Regarding Unlawful Construction
		24 (Bill Section 211)	FWPA - Adds "for such purposes and under such restrictions as the Commission may determine"
		25 (Bill Section 212)	FWPA - Repealed
		30 (Bill Section 212)	FWPA - Repealed
		New Powers of FPC Federal Power Act (FPA) Part II	
202	Interconnection and Coordination Emergencies and Transmission to Foreign Countries		
203	Disposition of Property Consolidations and Purchase of Securities		
204	Issuance of Securities and Assumption of Liabilities		
205	Rates and Charges, Schedules, and Suspension of New Rates		
206	Fixing Rates and Charges Determining Cost of Production or Transmission		
207	Providing Adequate Service		
208	Determining Cost of Property		
209	Using Joint Boards with State Commissions		
Part III - FPA		301	Accounts, Records, and Memoranda
		302	Rates of Depreciation
		303	Requirements Applicable to Agencies
		304	Reports
		305	Officials Dealing in Securities Interlocking Directorates
		306	Complaints
		307	Investigations by Commission, Attendance of Witnesses, and Depositions
		308	Hearings Rules of Procedure
		309	Administrative Powers of Commission Rules, Regulations, and Orders
		310	Appointment of Officers and Employees
		311	Investigations Relating to Electric Energy
		312	Publication and Sale of Reports
		313	Rehearings and Court Review
314	Enforcement of Act, Regulations, and Orders		
315	General Forfeiture Provisions		
316	General Penalties		
317	Jurisdiction of Offenses Enforcement of Liabilities and Duties		
318	Conflict of Jurisdiction		
319	Separability		
320	Title - Federal Power Act		

Source: Public Utility Act of 1935 (P.L. 74-333; 49 Stat. 803); Title II Federal Power Act of 1935 (49 Stat. 838 - 863).

Table 12. Crises & Congressional Responses

Crisis	Dates of Crisis	Congressional Responses	Response Dates
Stagflation	1973 - 1982	Department of Energy Organization Act of 1977 (P.L. 95-91; 91 Stat. 565) Public Utility Regulatory Policies Act (PURPA) of 1978 (P.L. 95-617; 92 Stat. 3117)	8/4/1977 11/9/1978
Gulf War Oil Prices Rise	1990- 1991	Energy Policy Act of 1992 (P.L. 102-486; 106 Stat. 2776)	11/24/1992
California Electricity Crisis	2000- 2003	Energy Policy Act (EPAct) of 2005 (P.L. 109-58; 119 Stat. 594)	8/8/2005
Northeast Blackout of 2003	8/14/2003 - 8/15/2003	Energy Policy Act (EPAct) of 2005 (P.L. 109-58; 119 Stat. 594)	8/8/2005

Table 13. Keyword Search Table

Bargaining
California Electricity Crisis
Co-generation
Department of Energy Organization Act of 1977
Deregulation
Distribution
Electricity Competition and Reliability Act of 1999
Electricity Corridors
Electricity Price Spikes
Electricity Rates
Energy Market
Energy Policy Act of 1992
Energy Policy Act of 2005
Environmental Issues
Federal Energy Regulatory Commission
Federal Power Commission
Fees and Permits
FERC Orders 888, 889, & 2000
Fines and Penalties
Generation
Gulf War
Market Restructuring
Network
North American Electric Reliability Council
Northeast Blackout of 1965
Northeast Blackout of 2003
OPEC Oil Embargo
Power Outage
Public Utility Regulatory Policies Act of 1978
Regional Reliability Entities
Reliability
Rules and Regulations
Stagflation
Suspend Restructuring
Transmission

Table 14. Federal Energy Regulatory Commission Docket Prefixes

Prefix	Definition
CE	Critical Energy Infrastructure Information
E	All Electric Cases (Replaced by ER, ES, EL, etc. prefixes)
EC	Applications of Electric Public Utilities for Authority to Sell, Lease, Purchase, Acquire, or Merge, and Applications for Determination of Jurisdiction
EF	Federal Electric Rates for DOE's Power Administrations
EG	Applications for Exempt Wholesale Generation Determinations
EL	Miscellaneous Formal Filings Related to Electric Power
ER	Electric Rate Filings
ES	Issuance of Securities and Assumption of Liabilities of Electric Utilities
ID	Interlocking Directorates for Electric Utilities
IR	Requests for Waiver of PURPA Regulations
NJ	Non-Jurisdictional / Electric
OA	Open Access Transmission Tariffs
PA	Audits other than financial audits by the Chief Accountant
PH	Exemption from or Waiver of Regulation as Holding Company (FERC-65A [ExemptionNotification] and FERC-65B [Waiver Notification])
PL	General Policy Cases
QF	Qualifying Status of Cogeneration and Small Power Production Facilities
RE	Requests for Extensions of Time or Exemptions under PURPA
RR	ERO Rules and Organizational Filings
RT	Electric Rate Filings - Rate Transmission
SC	Stranded Costs / Electric
TS	Transmission Standards
TX	Transmission Services under Section 211 of the Federal Power Act

Source: Federal Energy Regulatory Commission. (2014). *Docket prefixes*. Retrieved August 27, 2013, from <http://www.ferc.gov/docs-filing/elibrary/docket-prefix.pdf>.

Table 15. FERC Appropriations by Fiscal Year

Fiscal Year	Appropriations
1978	\$41,600,000
1979	\$54,130,000
1980	\$68,387,000
1981	\$75,374,000
1982	\$76,177,000
1983	\$79,665,000
1984	\$89,582,000
1985	\$95,677,000
1986	\$95,568,000
1987	\$99,079,000
1988	\$100,000,000
1989	\$108,760,000
1990	\$116,550,000
1991	\$122,750,000
1992	\$141,071,000
1993	\$158,639,000
1994	\$165,375,000
1995	\$166,173,000
1996	\$131,290,000
1997	\$146,290,000
1998	\$162,141,000
1999	\$167,500,000
2000	\$174,950,000
2001	\$175,200,000
2002	\$184,155,000
2003	\$192,000,000
2004	\$204,400,000
2005	\$210,000,000
2006	\$220,400,000
2007	\$221,901,518

Sources:

U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, 1979, p. 3092. Appropriations Hearings for FY 1980 shows FY 1978 appropriation; 1980, p. 2890. Appropriations Hearings for FY 1981 shows FY 1979 appropriation;

(P.L. 96-69; 93 Stat. 440) Fiscal Year 1980;

(P.L. 96-304; 94 Stat. 870) Fiscal Year 1980 Supplemental;

(P.L. 96-367; 94 Stat. 1335) Fiscal Year 1981;

(P.L. 97-12; 95 Stat. 85) Fiscal Year 1981 Supplemental;

(P.L. 97-88; 95 Stat. 1145) Fiscal Year 1982;

Office of Management and Budget, Budget of the United States Government, FY 1985, p. I-114 shows FY 1983 appropriation;

(P.L. 98-50; 97 Stat. 258) Fiscal Year 1984;

(P.L. 98-63; 97 Stat. 316) Fiscal Year 1984 Supplemental;

(P.L. 98-360; 98 Stat. 416) Fiscal Year 1985;

(P.L. 99-141; 99 Stat. 575) Fiscal Year 1986;

(P.L. 99-500; 100 Stat. 1783-208) Fiscal Year 1987;

(P.L. 99-591; 100 Stat. 3341-208) Fiscal Year 1987;

(P.L. 100-202; 101 Stat. 1329-124) Fiscal Year 1988;

(P.L. 100-371; 102 Stat. 870) Fiscal Year 1989;

(P.L. 101-101; 103 Stat. 661) Fiscal Year 1990;

(P.L. 101-514; 104 Stat. 2093) Fiscal Year 1991;

(P.L. 102-104; 105 Stat. 531) Fiscal Year 1992;

(P.L. 102-377; 106 Stat. 1338) Fiscal Year 1993;

(P.L. 103-126; 107 Stat. 1330) Fiscal Year 1994;

(P.L. 103-316; 108 Stat. 1719) Fiscal Year 1995;

(P.L. 104-46; 109 Stat. 416) Fiscal Year 1996;

(P.L. 104-206; 110 Stat. 2998) Fiscal Year 1997;

(P.L. 105-62; 111 Stat. 1334) Fiscal Year 1998;

(P.L. 105-245; 112 Stat. 1851) Fiscal Year 1999;

(P.L. 106-60; 113 Stat. 494) Fiscal Year 2000;

(P.L. 106-377; 114 Stat. 1441A-78) Fiscal Year 2001;

(P.L. 107-66; 115 Stat. 508) Fiscal Year 2002;

(P.L. 108-7; 117 Stat. 153) Fiscal Year 2003;

(P.L. 108-137; 117 Stat. 1859) Fiscal Year 2004;

(P.L. 108-447; 118 Stat. 2957) Fiscal Year 2005;

(P.L. 109-103; 119 Stat. 2277) Fiscal Year 2006;

Federal Energy Regulatory Commission. (2007). *2007 Annual Report*. Washington, D.C.: U.S. Government Printing Office. Retrieved from <http://www.ferc.gov/about/strat-docs/fy07-an-rpt.pdf>. Report shows FY 2007 appropriation.

Table 16. Proposed Legislation Directly Referencing FERC 1977 to 1966, 1989 to 1994, & 1999 to 2006

Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Least Major Action	Committee
1977	H.R. 4018	H.R. 4018	Public Utility Regulatory Policies Act	95-617	2/24/1977	Rep Evans, Thomas B. Jr. [DE]	House Ways and Means; Senate Finance	House Ways and Means; Senate Finance
1978	H.R. 3146	H.R. 3146	Powdermill and Industrial Fuel Use Act	95-620	3/16/1977	Rep McGeehan, Robert C. [NY-30]	House Ways and Means; Senate Finance	House Ways and Means; Senate Finance
1978	H.R. 4394	H.R. 4394	Natural Gas Policy Act	95-621	3/21/1977	Rep Brooks, Jack B. [TX-9]	House Ways and Means; Senate Finance	House Ways and Means; Senate Finance
1978	H.R. 4394	H.R. 4394	Department of Energy Organization Act	S. 826	5/2/1977	Rep Brooks, Jack B. [TX-9]	House Government Operations; House Post Office and Civil Service	House Government Operations; House Post Office and Civil Service
1978	H.R. 4394	H.R. 4394	Crisis Oil Pricing Amendment	95-372	1/20/1977	Rep Dingell, John D. [MI-16]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1978	S. 9	S. 9	Over Continental Shelf Lands Act Amendments	95-372	1/20/1977	Sen Jackson, Henry M. [WA]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1978	S. 826	S. 826	Department of Energy Organization Act	95-91	9/20/1977	Sen Riehoff, Abraham A. [CT]	Senate Governmental Affairs	Senate Governmental Affairs
1978	S. 2114	S. 2114	Public Utilities Regulatory Policy Act	95-91	9/20/1977	Sen Johnston, J. Bennett [LA]	Placed on calendar in Senate under Subjects on the Table	Placed on calendar in Senate under Subjects on the Table
1978	S. 2249	S. 2249	An Act to prohibit discrimination in rates charged by the Southwestern Power Administration	95-456	10/13/1977	Sen Englehorn, Thomas F. [MO]	Senate Energy and Natural Resources; House Interior and Insular Affairs	Senate Energy and Natural Resources; House Interior and Insular Affairs
1978	S. 2322	S. 2322	Status and salary of certain executive positions in certain independent regulatory agencies	11/22/1977	11/22/1977	Sen Percy, Charles H. [IL]	Referred to Senate Committee on Governmental Affairs	Referred to Senate Committee on Governmental Affairs
1978	H.R. 11392	H.R. 11392	Appropriations to the Department of Energy and the Federal Energy Regulatory Commission	95-1078	6/5/1978	Rep Staggers, Harley O. [WV-3]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1978	H.R. 11463	H.R. 11463	Agriculture Emergency Act	3/13/1978	3/13/1978	Rep Moore, W. Hanson [LA-6]	House Ways and Means	House Ways and Means
1978	H.R. 11732	H.R. 11732	Atomic Energy Act	3/22/1978	3/22/1978	Rep Moore, W. Hanson [LA-6]	House Ways and Means	House Ways and Means
1978	H.R. 12600	H.R. 12600	A bill to prohibit discrimination in rates charged by the Southwestern Power Administration	5/9/1978	5/9/1978	Rep Edward, Richard H. [MO-8]	House Interior and Insular Affairs	House Interior and Insular Affairs
1978	H.R. 12638	H.R. 12638	A bill to provide that certain insurance policies may be constructed	5/9/1978	5/9/1978	Rep Blanton, Michael [KS-3]	House Public Works and Transportation	House Public Works and Transportation
1978	H.R. 13208	H.R. 13208	Energy and Waste Development Appropriation Act	Voted	6/1/1978	Rep Rostenkowitz, Tom [AL-4]	House Appropriations; Senate Appropriations	House Appropriations; Senate Appropriations
1978	H.R. 13144	H.R. 13144	A bill to provide that certain insurance policies may be constructed	7/18/1978	7/18/1978	Rep Blanton, Michael [KS-3]	House Public Works and Transportation	House Public Works and Transportation
1978	H.R. 13113	H.R. 13113	A bill to provide that certain insurance policies may be constructed	8/17/1978	8/17/1978	Rep Blanton, Michael [KS-3]	House Public Works and Transportation	House Public Works and Transportation
1978	H.R. 13844	H.R. 13844	Utility Licensure Act	8/17/1978	8/17/1978	Rep Work, Timothy [CO-2]	House Ways and Means	House Ways and Means
1978	H.R. 14134	H.R. 14134	Department of Energy Organization Act Amendments of 1978	9/19/1978	9/19/1978	Rep Myers, Gray A. [PA-21]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1978	H.R. 1283	H.R. 1283	A resolution providing for the consideration of H.R. 11392, a bill to authorize appropriations	1/12/1978	1/12/1978	Rep Stok, B. F. [CA-13]	House Rules	House Rules
1978	S. 2448	S. 2448	Emergency Natural Gas Amendments	1/27/1978	1/27/1978	Sen Nissenbaum, Howard M. [OH]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1978	S. 2340	S. 2340	Independent Regulatory Commission Act	6/23/1978	6/23/1978	Sen Glenn, John H. Jr. [OH]	Senate Governmental Affairs	Senate Governmental Affairs
1979	H.R. 377	H.R. 377	Electric Utility Rate Reform Act of 1979	1/15/1979	1/15/1979	Rep Dingell, John D. [MI-16]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 1004	H.R. 1004	Department of Energy Civilian Programs Authorization Act for Fiscal Year 1979	1/18/1979	1/18/1979	Rep Leach, John D. [IA-1]	House Committee on Science and Technology	House Committee on Science and Technology
1979	H.R. 1977	H.R. 1977	Consumer Energy Hearings Act of 1979	2/8/1979	2/8/1979	Rep Leach, John D. [IA-1]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 3000	H.R. 3000	Department of Energy Civilian Programs Act for Fiscal Years 1980 and 1981	1/29/1979	1/29/1979	Rep Staggers, Harley O. [WV-3]	House Finance	House Finance
1979	H.R. 3180	H.R. 3180	Department of Energy Civilian Programs 1979 Authorization Act	3/22/1979	3/22/1979	Rep Dingell, John D. [MI-16]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 3431	H.R. 3431	A bill to amend the Federal Power Act Federal Energy Regulatory Commission Hydro	4/4/1979	4/4/1979	Rep Edwards, James M. [VT]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 3794	H.R. 3794	Department of Energy Civilian Programs 1980 Authorization Act	4/30/1979	4/30/1979	Rep Weaver, James H. [OR-4]	House Committee on Science and Technology	House Committee on Science and Technology
1979	H.R. 4137	H.R. 4137	Northwest Renewable Resources, Conservation, and Energy Planning Act	5/21/1979	5/21/1979	Rep Weaver, James H. [OR-4]	House Committee on Interior and Insular Affairs	House Committee on Interior and Insular Affairs
1979	H.R. 4289	H.R. 4289	Energy and Waste Development Appropriation Act, 1979	5/31/1979	5/31/1979	Rep Whitson, James L. [MS-1]	House Appropriations; Senate Appropriations	House Appropriations; Senate Appropriations
1979	H.R. 4388	H.R. 4388	Energy and Waste Development Appropriation Act, 1980	6/7/1979	6/7/1979	Rep Whitson, James L. [MS-1]	House Appropriations; Senate Appropriations	House Appropriations; Senate Appropriations
1979	H.R. 4471	H.R. 4471	Quintus Geothermal Energy Development Act of 1979	6/14/1979	6/14/1979	Rep Symms, Steven D. [ID-1]	House Committee on Ways and Means	House Committee on Ways and Means
1979	H.R. 4489	H.R. 4489	Priority Energy Project Act of 1979	6/15/1979	6/15/1979	Rep Dingell, John D. [MI-16]	House Interior and Insular Affairs	House Interior and Insular Affairs
1979	H.R. 4622	H.R. 4622	Energy Supply Act	6/26/1979	6/26/1979	Rep Nelson, Bill [FL-9]	House Committee on Ways and Means	House Committee on Ways and Means
1979	H.R. 4648	H.R. 4648	Utility Licensure Act of 1979	6/27/1979	6/27/1979	Rep Work, Timothy [CO-2]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 4672	H.R. 4672	Rational Utility Rate Act of 1979	6/28/1979	6/28/1979	Rep Burns, Michael D. [MD-8]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 4807	H.R. 4807	Department of Energy Civilian Programs 1980 Authorization Act	7/16/1979	7/16/1979	Rep Staggers, Harley O. [WV-3]	House Committee on Science and Technology	House Committee on Science and Technology
1979	H.R. 4839	H.R. 4839	Department of Energy Civilian Programs 1980 Authorization Act	7/18/1979	7/18/1979	Rep Staggers, Harley O. [WV-3]	House Committee on Science and Technology	House Committee on Science and Technology
1979	H.R. 5146	H.R. 5146	Pacific Northwest Electric Power Planning and Conservation Act	8/20/1979	8/20/1979	Rep Utsumi, Al [OR-3]	House Interior and Insular Affairs	House Interior and Insular Affairs
1979	H.R. 5278	H.R. 5278	Energy Supply Act	8/11/1979	8/11/1979	Rep Bassett, Morris	House Committee on Ways and Means	House Committee on Ways and Means
1979	H.R. 5378	H.R. 5378	A bill to authorize the Secretary of the Interior to enter into feasibility arrangements	8/13/1979	8/13/1979	Rep Utah, Morris K. [AZ-2]	House Interior and Insular Affairs; Senate Energy and Natural Resources	House Interior and Insular Affairs; Senate Energy and Natural Resources
1979	H.R. 5483	H.R. 5483	Marine Resources Protection Act	8/28/1979	8/28/1979	Rep Doh, Thomas D. [WA-5]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1979	H.R. 5622	H.R. 5622	Citizen Energy Act of 1979	10/17/1979	10/17/1979	Rep Neftci, Tevfik [CT-5]	House Committee on the Judiciary	House Committee on the Judiciary
1979	H.R. 5624	H.R. 5624	A bill to amend the Tennessee Valley Authority Act of 1933	10/17/1979	10/17/1979	Rep Kashi, Neki J. [WV-4]	House Public Works and Transportation	House Public Works and Transportation
1979	H.R. 6141	H.R. 6141	Ocean Thermal Energy Conversion Act of 1980	12/14/1979	12/14/1979	Rep South, Gerry E. [MA-12]	House Merchant Marine and Fisheries	House Merchant Marine and Fisheries
1979	S. 666	S. 666	Comprehensive Liquidated Energy Gas Storage and Liability Act of 1979	3/14/1979	3/14/1979	Sen Durkin, John A. [NH]	Senate Commerce, Science, and Transportation	Senate Commerce, Science, and Transportation
1979	S. 885	S. 885	Department of Energy Authorization Act for Fiscal Year 1980	3/21/1979	3/21/1979	Sen Jackson, Henry M. [WA]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 921	S. 921	Pacific Northwest Electric Power Planning and Conservation Act	4/5/1979	4/5/1979	Sen Jackson, Henry M. [WA]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1030	S. 1030	Emergency Energy Conservation Act of 1979	4/28/1979	4/28/1979	Sen Johnston, J. Bennett [LA]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1308	S. 1308	Priority Energy Project Act of 1980	6/13/1979	6/13/1979	Sen Jackson, Henry M. [WA]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1415	S. 1415	Priority Energy Project Act of 1979	6/26/1979	6/26/1979	Sen McClure, James A. [ID]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1507	S. 1507	A bill relating to the settlement of certain claims and controversies in California	7/13/1979	7/13/1979	Sen Burton, Lloyd M. [TX]	Senate Indian Affairs (Select)	Senate Indian Affairs (Select)
1979	S. 1516	S. 1516	Energy Mobilization Act of 1979	7/13/1979	7/13/1979	Sen Burton, Lloyd M. [TX]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1538	S. 1538	A bill to amend the Federal Power Act to permit the Federal Energy Regulatory Commission	7/21/1979	7/21/1979	Sen Durkin, John A. [NH]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1979	S. 1904	S. 1904	Citizen Energy Act of 1979	10/17/1979	10/17/1979	Sen Matsushima, Howard M. [OH]	Senate Energy and Natural Resources	Senate Energy and Natural Resources
1980	H.R. 6617	H.R. 6617	Department of Energy Authorization Act for Fiscal Years 1981 and 1982-Civilian Applications	2/26/1980	2/26/1980	Rep Staggers, Harley O. [WV-3]	House Science and Technology	House Science and Technology
1980	H.R. 6677	H.R. 6677	Pacific Northwest Electric Power Planning and Conservation Act	3/3/1980	3/3/1980	Rep Smith, Al [WV-2]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1980	H.R. 6807	H.R. 6807	Domestic Energy Security Act	3/13/1980	3/13/1980	Rep Dunsinger, Williams E. [CA-39]	House Ways and Means	House Ways and Means
1980	H.R. 6879	H.R. 6879	Coal Pipeline Act of 1980	3/19/1980	3/19/1980	Rep Staggers, Harley O. [WV-3]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1980	H.R. 6930	H.R. 6930	Powdermill Fuel Conservation Act of 1980	3/26/1980	3/26/1980	Rep Staggers, Harley O. [WV-3]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce
1980	H.R. 6946	H.R. 6946	A bill to amend the Federal Power Act 100 kilowatts of installed capacity	3/26/1980	3/26/1980	Rep Wolf, Louise L. [NY-6]	House Interstate and Foreign Commerce	House Interstate and Foreign Commerce

Table 16 Continues on to the Next Page

Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Least Major Action	Committee
1981	96th	H.R. 6948	Micro-Hydroelectric Equipment Act of 1980		3/26/1980	Rep. Wolff, Lewis L. (NY-6)	3/26/1980	House Interstate and Foreign Commerce
	96th	H.R. 6999	Powdermill Fuel Conservation Act of 1980		4/1/1980	Rep. Berlin, Carl (NY-7)	4/1/1980	House Interstate and Foreign Commerce
	96th	H.R. 7008	Utility Rate Reform Act of 1980		5/6/1980	Rep. Barrow, Michael D. (MD-5)	5/6/1980	House Interstate and Foreign Commerce
	96th	H.R. 7041	Power Plant Fuel Conservation Act of 1980		5/14/1980	Rep. Barnard, Doug Jr. (GA-10)	5/14/1980	House Interstate and Foreign Commerce
	96th	H.R. 7042	Supplemental Appropriations and Reauthorization Act of 1980		96-304	Rep. Wilms, James L. (MS-1)	7/6/1980	House Appropriations; Senate Appropriation
	96th	H.R. 7050	Energy and Water Development Appropriation Act, 1981		96-367	Rep. Byrill, Tom (AL-4)	10/1/1980	House Appropriations; Senate Appropriation
	96th	H.R. 7059	Powdermill Fuel Conservation Act of 1980		7/24/1980	Rep. Dingell, John D. (MI-16)	7/24/1980	House Interstate and Foreign Commerce
	96th	H.R. 7318	A bill to improve the management of the National Forests		7/25/1980	Rep. Weaver, James H. (OR-4)	11/17/1980	House Agriculture
	96th	H.R. 7566	A bill to prohibit the use of master meters for gas and electricity supplied to new buildings		7/30/1980	Rep. Robinson, Anthony C. (CA-33)	7/30/1980	House Interstate and Foreign Commerce
	96th	H.R. 7913	State Wild and Scenic Rivers Planning and Preservation Act		8/19/1980	Rep. Fortson, Peter H. (PA-8)	8/19/1980	House Interior and Juvenile Affairs
	96th	H.R. 8117	Pacific Northwest Electric Power Planning and Conservation Act		9/18/1980	Rep. Smith, Al (WA-3)	9/18/1980	House Interstate and Foreign Commerce
	96th	H.R. 8230	Utility Rate Reform Act of 1980		9/29/1980	Rep. Barrow, Michael D. (MD-5)	9/29/1980	House Interstate and Foreign Commerce
	96th	H.R. 8401	Oil Price Control Act		12/2/1980	Rep. Conaway, John Jr. (TX-11)	12/2/1980	House Ways and Means
	96th	H.R. 8408	Oil Price Control Act		12/3/1980	Rep. Conaway, John Jr. (TX-11)	12/3/1980	House Interstate and Foreign Commerce
	96th	H.R. 8549	Wholesale Electric Rate Freeze Act		1/30/1981	Rep. Peterson, Jerry M. (CA-38)	3/25/1980	House Commerce (Select)
	96th	H.R. 8582	Amending the Rules of the House of Representatives to establish an energy committee		2/25/1980	Rep. Grass, Phil (TX-6)	2/25/1980	House Rules
	96th	H.R. 8583	Amending the Rules of the House of Representatives to establish a committee on energy		2/25/1980	Rep. Grass, Phil (TX-6)	2/25/1980	Senate Energy and Natural Resources
	96th	S. 3332	Department of Energy Authorization Act for Fiscal Year 1981-Civilian Application		2/26/1980	Sen. Jackson, Henry M. (WA)	7/31/1980	Senate Energy and Natural Resources
	96th	S. 3377	Department of Energy Authorization for Supplemental Appropriations Act for Fiscal Year 1980		4/30/1980	Sen. Jackson, Henry M. (WA)	4/30/1980	Senate Energy and Natural Resources
	96th	S. 2899	Department of Energy Organization Act Amendment of 1980		7/29/1980	Sen. Jackson, Henry M. (WA)	7/29/1980	Senate Energy and Natural Resources
	96th	S. 3111	A bill to amend certain provisions of the Federal Power Act		9/15/1980	Sen. McGovern, George (SD)	9/15/1980	Senate Energy and Natural Resources
	96th	H.R. 830	Department of Energy Termination Act		1/13/1981	Rep. Collins, James M. (TX-3)	1/22/1981	House Government Operations
	96th	H.R. 854	A bill to prohibit the use of master meters for gas and electricity supplied to new buildings		1/20/1981	Rep. Gever, Emerson (OH-4)	2/6/1981	House Energy and Commerce
	96th	H.R. 8856	A bill to prohibit the use of master meters for gas and electricity supplied to new buildings		2/5/1981	Rep. Robinson, Anthony C. (CA-33)	2/5/1981	House Energy and Commerce
	96th	H.R. 8971	New England Regional Power Planning and Distribution Act of 1981		4/1/1981	Rep. Schneider, Charles (RI-2)	5/14/1981	House Energy and Commerce
	96th	H.R. 3002	Department of Energy Civilian Program, 1982, Authorization Act		4/2/1981	Rep. Conner, Richard L. (NY-24)	5/6/1981	House Energy and Commerce
	96th	H.R. 3167	A bill to authorize the licensing of Hanford Dam, and for other purposes.		4/8/1981	Rep. Stump, Bob (AZ-3)	5/14/1981	House Interior and Juvenile Affairs
	96th	H.R. 3447	Department of Energy Civilian Program Authorization Act for Fiscal Years 1982 and 1983		5/5/1981	Rep. Egan, Don (PE-2)	5/19/1981	House Science and Technology
	96th	H.R. 3512	Supplemental Appropriations and Reauthorization Act, 1981		9/7-12	Rep. Wilms, James L. (MS-1)	6/2/1981	House Appropriations; Senate Appropriations
	96th	H.R. 3634	Oil Fee Pricing Act		5/20/1981	Rep. Conner, John Jr. (RI-1)	5/26/1981	House Energy and Commerce
	96th	H.R. 4144	Energy and Water Development Appropriation Act, 1982		9/7-88	Rep. Byrill, Tom (AL-4)	1/24/1981	House Appropriations; Senate Appropriations
	96th	H.R. 4390	Natural Gas Production, Utilization, and Conservation Act		8/4/1981	Rep. Grass, Phil (TX-6)	8/5/1981	House Energy and Commerce
96th	H.R. 4488	Department of Energy Organization Act Amendment of 1981		9/15/1981	Rep. Byrill, Tom (AL-4)	9/23/1982	House Energy and Commerce	
96th	H.R. 4489	Natural Gas Market Transition Act of 1981		11/4/1981	Rep. Collins, James M. (TX-3)	11/5/1981	House Energy and Commerce	
96th	H.R. 4534	Speaker to retain counsel Claudia v. INS & Consumer Energy Council of America et al. v. FERC		1/29/1981	Rep. Foley, Thomas S. (WA-5)	1/29/1981	Senate Energy and Natural Resources	
96th	S. 877	New England Regional Power Planning and Distribution Act of 1981		4/9/1981	Sen. Chafee, John H. (RI)	4/9/1981	Senate Energy and Natural Resources	
96th	S. 896	New England Regional Power Planning and Distribution Act of 1981		4/10/1981	Sen. Donohue, Peter V. (NM)	4/24/1981	Senate Energy and Natural Resources	
96th	S. 1021	Department of Energy Authorization Act for Fiscal Year 1982-Civilian Application		4/28/1981	Sen. McClure, James A. (ID)	1/14/1981	Senate Energy and Natural Resources	
96th	S. 1080	Regulatory Reform Act		4/30/1981	Sen. Laxalt, Paul D. (NV)	3/24/1982	Senate Governmental Affairs; Senate Judiciary	
96th	S. 1281	Energy Information Administration Amendment of 1981		5/21/1981	Sen. McClure, James A. (ID)	5/21/1982	Senate Energy and Natural Resources	
96th	S. 1573	Lake Oregan, Inyokernic facility part of the Federal Power Act		7/31/1981	Sen. Hatfield, Mark O. (OR)	10/15/1982	Senate Energy and Natural Resources	
96th	S. 1656	Department of Energy Organization Act Amendment of 1981		9/15/1981	Sen. Nickles, Don (OK)	9/29/1982	Senate Energy and Natural Resources	
96th	S. 1844	Coal Distribution and Utilization Act of 1982		11/12/1981	Sen. Johnston, J. Bennett (LA)	8/17/1982	Senate Energy and Natural Resources	
96th	S. 1867	A bill to amend the average limitation and vestidity provisions of Federal reclamation		11/18/1981	Sen. McClure, James A. (ID)	12/21/1982	Senate Energy and Natural Resources	
96th	S. RES. 121	Senate Legal Counsel advises certain Consumer Energy Council of America, Inc. et al. v. FERC		5/8/1981	Sen. Baker, Howard H. Jr. (TX)	5/8/1981	Senate Energy and Natural Resources	
1982	97th	H.R. 2363	Wholesale Electric Rate Freeze Act		1/27/1982	Rep. Conaway, Tom (IL-1)	2/2/1982	House Energy and Commerce
	97th	H.R. 2753	A bill to amend section 207 of the Federal Power Act to limit the recovery of crop rate increases.		3/9/1982	Rep. Fradette, Tom (LA-5)	8/13/1982	House Energy and Commerce
	97th	H.R. 3566	Natural Gas Production, Utilization, and Conservation Act		3/17/1982	Rep. Grass, Phil (TX-6)	3/24/1982	House Energy and Commerce
	97th	H.R. 3923	Energy Information Administration Amendment of 1981		3/23/1982	Rep. Collins, James M. (TX-3)	3/20/1982	House Energy and Commerce
	97th	H.R. 4531	Natural Gas Consumer Relief Act		6/2/1982	Rep. Young, Robert A. (MO-2)	6/7/1982	House Energy and Commerce
	97th	H.R. 4813	Oil Pipeline Regulatory Reform Act of 1982		7/21/1982	Rep. Brown, John B. (LA-7)	9/29/1982	House Energy and Commerce
	97th	H.R. 4850	Natural Gas Fair Pricing Act		7/22/1982	Rep. Young, Robert A. (MO-2)	7/27/1982	House Energy and Commerce
	97th	H.R. 4972	Federal Energy Reorganization Act of 1982		8/11/1982	Rep. Brown, Frank J. (NY-34)	8/18/1982	House Government Operations; House Energy and Commerce
	97th	H.R. 5122	Natural Gas Marketing Improvements Act of 1982		9/16/1982	Rep. Brown, Charles Jr. (OH-7)	9/27/1982	House Energy and Commerce
	97th	H.R. 5142	Energy and Water Development Appropriation Act, 1983		9/16/1982	Rep. Byrill, Tom (AL-4)	9/27/1982	House Appropriation
	97th	H.R. 5229	Prevent the use of automatic adjustment clauses by Federally regulated gas and electric utilities.		9/30/1982	Rep. Findley, Paul (IL-20)	10/1/1982	House Energy and Commerce
	97th	H.R. 2943	Natural Gas Consumer Protection Act of 1982		9/30/1982	Rep. Rappah, Ralph (OH-16)	10/1/1982	House Energy and Commerce
	97th	H.R. 2514	Natural Gas Consumer Protection Act of 1982		9/30/1982	Rep. Fuchs, Thomas Joseph (LA-2)	10/1/1982	House Energy and Commerce
	97th	H.R. 3111	Natural Gas Price Control Act of 1982		11/29/1982	Rep. Norval, Henry (NY-37)	1/29/1982	House Energy and Commerce
	97th	H.R. 3358	Natural Gas Marketing Act of 1982		12/3/1982	Rep. Brown, Beverly B. (MD-6)	12/10/1982	House Energy and Commerce
	97th	H.R. 3733	Temporary Natural Gas Market Correction Act of 1982		12/6/1982	Rep. Oberstar, James L. (MD-8)	12/10/1982	House Energy and Commerce
	97th	H.R. 3739	Natural Gas Import Policy Act of 1982		12/7/1982	Rep. Conaway, Tom (IL-1)	12/10/1982	House Energy and Commerce
	97th	H.R. 3911	Natural Gas Price Relief and Market Correction Act		12/13/1982	Rep. Coleman, E. Thomas (MO-6)	12/21/1982	House Energy and Commerce
	97th	H. RES. 467	A joint resolution authorizing the National Gas Transportation System to buy Federal loans.		4/29/1982	Rep. Conaway, Tom (IL-1)	4/30/1982	House Energy and Commerce
	97th	H. RES. 633	A joint resolution requiring FERC to commence rulemaking on natural gas pipeline rates		12/13/1982	Rep. Dixon, Julian C. (CA-33)	12/13/1982	House Energy and Commerce
	97th	H. RES. 371	Sense of the House of Representatives to accelerate withdrawal of natural gas prices.		2/24/1982	Rep. Dingell, John D. (MI-16)	3/1/1982	House Energy and Commerce
	97th	H. RES. 382	Sense of the House of Representatives to accelerate withdrawal of natural gas prices.		3/10/1982	Rep. Dingell, John D. (MI-16)	3/15/1982	House Energy and Commerce
	97th	H. RES. 624	Sense of the House of Representatives unworkable rise in the price of natural gas to consumers.		12/8/1982	Rep. Vento, Bruce F. (MS-4)	12/10/1982	House Energy and Commerce
	97th	S. 2074	Natural Gas Production and Market Adjustment Act of 1982		2/8/1982	Sen. Johnston, J. Bennett (LA)	2/8/1982	Senate Energy and Natural Resources
	97th	S. 2292	A bill to amend section 207 of the Federal Power Act relative to crop rate increases.		3/29/1982	Sen. Mansueti, Howard M. (OH)	3/29/1982	Senate Energy and Natural Resources

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Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Least Major Action	Committee
1990	[101st]	H.R. 4071	Extend deadline under FPA construction of a hydroelectric project in New York		2/22/1990	Rep Boehlert, Sherman [NY-23]	3/5/1990	House Energy and Commerce
	[101st]	H.R. 4021	Amend FPA to clarify that States have primary, over water and waste rights.		5/24/1990	Rep Crist, Larry E. [ID-1]	6/8/1990	House Energy and Commerce
	[101st]	H.R. 4019	Energy and Waste Development Appropriations Act, 1991	101-514	6/13/1990	Rep Borell, Tom [AL-4]	11/5/1990	House Appropriations, House Appropriations
	[101st]	H.R. 3660	To restore an Office of Inspector General at FEREC		6/14/1990	Rep Rowland, John G. [TX-5]	6/18/1990	House Government Operations
	[101st]	H.R. 3235	National Fish and Wildlife Restoration Act Amendments of 1990		10/1/1990	Rep Smith, Gerry E. [MA-10]	9/26/1990	House Merchant Marine and Fisheries
	[101st]	H.R. 3207	Multiple Natural Gas Jurisdiction Act of 1990		8/27/1990	Rep Smith, W. J. [Illinois] [IL-3]	10/27/1990	House Energy and Commerce
	[101st]	H.R. 3205	Comprehensive Energy Safety Act of 1990		8/27/1990	Rep Smith, W. J. [Illinois] [IL-3]	12/9/1990	House Energy and Commerce
	[101st]	H.R. 3207	National Energy Efficiency Act of 1990		10/1/1990	Rep Smith, W. J. [Illinois] [IL-3]	10/30/1990	House Energy and Commerce
	[101st]	S.2282	Subsidiary, Alaska, and Concord Wild and Scenic River Study Act of 1990		3/8/1990	Sen Kerry, John F. [MA]	3/8/1990	Senate Energy and Natural Resources
	[101st]	S.2288	Nonconventional Fish Production Incentive Act of 1990		3/9/1990	Sen Dornan, Pete V. [CA]	9/26/1990	Senate Energy and Natural Resources
	[101st]	S.2415	Solar and Geothermal Power Production Incentive Act of 1990		4/4/1990	Sen Dornan, Pete V. [CA]	9/26/1990	Senate Energy and Natural Resources
	[101st]	S.2355	Wild and Scenic Rivers Act Lower Merced River in California		3/21/1990	Sen Johnston, J. Bennett [LA]	10/23/1990	Senate Energy and Natural Resources
	[101st]	S.2085	Multiple Natural Gas Jurisdiction Act of 1990		9/20/1990	Sen Johnston, J. Bennett [LA]	10/23/1990	Senate Energy and Natural Resources
	[101st]	S.3370	Natural Gas Competition Act of 1990		10/27/1990	Sen Dornan, Pete V. [CA]	10/27/1990	Senate Energy and Natural Resources
	[101st]	S.AMDT 3485	H.R. 3019 direct FEREC to solicit competitive bids for its geographic reporting contract.		8/7/1990	Sen Menzies, Howard M. [OH]	8/7/1990	Senate Energy and Natural Resources
1991	[102nd]	H.R. 69	Eliminate requirements for refunds or penalties under NCPA of 1978.		1/1/1991	Rep Bryant, John W. [TX-5]	2/11/1991	House Energy and Commerce
	[102nd]	H.R. 776	Energy Policy Act of 1992	102-486	2/4/1991	Rep Sharp, Philip R. [IN-3]	10/24/1992	House Energy and Commerce
	[102nd]	H.R. 1089	Multiple Natural Gas Jurisdiction Act of 1991		2/21/1991	Rep Tamm, W. J. [Illinois] [IL-3]	3/18/1991	House Energy and Commerce
	[102nd]	H.R. 1196	To establish a comprehensive energy conservation program.		2/28/1991	Rep Meyer, Jim [KS-3]	3/18/1991	House Energy and Commerce
	[102nd]	H.R. 1301	National Energy Strategy Act		3/6/1991	Rep Dinsell, John D. [ME-16]	3/18/1992	House Energy and Commerce
	[102nd]	H.R. 1543	Comprehensive Energy Policy Act of 1991		3/21/1991	Rep Leach, Norman F. [ND-1]	10/8/1992	House Energy and Commerce
	[102nd]	H.R. 2141	Establish Snake River Birds of Prey National Conservation Area in Idaho		4/30/1991	Rep Leach, Norman F. [ND-1]	10/7/1992	House Interior and Insular Affairs
	[102nd]	H.R. 2284	Electric Power Fair Access Act of 1991		5/2/1991	Rep Mathey, Edward J. [MA-7]	10/8/1992	House Energy and Commerce
	[102nd]	H.R. 2424	Natural gas rate increase determination FEREC whether just and reasonable		5/21/1991	Rep Volkmer, Harold L. [MO-9]	6/10/1991	House Energy and Commerce
	[102nd]	H.R. 2427	Energy and Waste Development Appropriations Act, 1992	102-104	5/22/1991	Rep Borell, Tom [AL-4]	8/27/1991	House Appropriations, Senate Appropriations
	[102nd]	H.R. 2431	Wild and Scenic Rivers Act Lower Merced River in California	102-412	5/22/1991	Rep Condit, Garry A. [CA-11]	10/23/1992	House Interior and Insular Affairs
	[102nd]	H.R. 2677	To authorize extensions of time limitations in certain FEREC-issued licenses.		6/18/1991	Rep Alexander, Bill [AR-3]	7/15/1991	House Energy and Commerce
	[102nd]	H.R. 2825	Electricity Policy Act of 1991		6/27/1991	Rep Sharp, Philip R. [IN-3]	7/30/1991	House Energy and Commerce
	[102nd]	H.R. 2835	Class Coal Technology Efficiency Improvement Act of 1991		7/11/1991	Rep Tamm, W. J. [Illinois] [IL-3]	7/26/1991	House Energy and Commerce
	[102nd]	H.R. 3027	Amend FPA to clarify jurisdiction of FEREC with regard to fresh waters in the State of Hawaii.		7/11/1991	Rep Tamm, W. J. [Illinois] [IL-3]	8/13/1991	House Energy and Commerce
	[102nd]	H.R. 3245	National Energy Resources Act of 1991		7/24/1991	Rep Math, Perry T. [HI-3]	8/13/1991	House Energy and Commerce
	[102nd]	H.R. 3284	Penalties Imposed on St. Joseph River in Michigan, not required license by FEREC		8/2/1991	Rep Griffin, Fred [MO-2]	9/13/1991	House Energy and Commerce
	[102nd]	H.R. 3665	Little River Canyon National Preserve Act of 1992		10/30/1991	Rep Borell, Tom [AL-4]	10/21/1992	House Interior and Insular Affairs
	[102nd]	S.226	A bill to establish a comprehensive energy conservation program.	102-427	1/31/1991	Sen Specter, Arlen [PA]	6/14/1991	Senate Finance
	[102nd]	S.241	National Energy Security Act of 1991		2/5/1991	Sen Johnston, J. Bennett [LA]	3/23/1991	Senate Energy and Natural Resources
	[102nd]	S.400	Multiple Natural Gas Jurisdiction Act of 1991		2/7/1991	Sen Johnston, J. Bennett [LA]	4/25/1991	Senate Energy and Natural Resources
	[102nd]	S.461	Lease Royalty Study Act of 1991		2/21/1991	Sen Smith, Bob [NE]	11/26/1991	Senate Energy and Natural Resources
	[102nd]	S.548	Wild and Scenic Rivers Act Lower Merced River in California		3/5/1991	Sen Crutcher, Alan [CA]	3/20/1992	Senate Energy and Natural Resources
	[102nd]	S.570	National Energy Strategy Act		3/6/1991	Sen Johnston, J. Bennett [LA]	5/13/1991	Senate Energy and Natural Resources
	[102nd]	S.606	Wild and Scenic Rivers Act Allegheny River in Pennsylvania	102-271	3/14/1991	Sen Burns, Conrad R. [MT]	4/20/1992	Senate Energy and Natural Resources
	[102nd]	S.661	American Energy Independence Act of 1991		3/14/1991	Sen Burns, Conrad R. [MT]	6/14/1991	Senate Finance
	[102nd]	S.662	A bill to increase the size of natural gas in the United States.		3/14/1991	Sen Smith, Tim [AZ-4]	4/9/1991	Senate Energy and Natural Resources
	[102nd]	S.741	National Energy Efficiency and Development Act of 1991		3/21/1991	Sen Smith, Tim [AZ-4]	6/14/1991	Senate Finance
	[102nd]	S.742	National Energy Efficiency and Development Act of 1991		3/21/1991	Sen Smith, Tim [AZ-4]	6/14/1991	Senate Finance
	[102nd]	S.812	A bill to amend the Federal Water Pollution Control Act.		4/11/1991	Sen Jaffar, James M. [VT]	4/11/1991	Senate Environment and Public Works
	[102nd]	S.893	Natural Gas Reregulation Relief Act of 1991		4/22/1991	Sen Menzies, Howard M. [OH]	6/19/1991	Senate Energy and Natural Resources
	[102nd]	S.1220	National Energy Security Act of 1991		6/5/1991	Sen Johnston, J. Bennett [LA]	11/1/1991	Senate Energy and Natural Resources
	[102nd]	S.1225	A bill to designate certain lands in California as wilderness, and for other purposes.		6/5/1991	Sen Seymour, John [CA]	3/8/1992	Senate Energy and Natural Resources
	[102nd]	S.1283	A bill to authorize extensions of time limitations in certain FEREC-issued licenses.		6/12/1991	Sen Bicker, Joseph R., Jr. [DE]	9/27/1991	Senate Energy and Natural Resources
	[102nd]	S.1522	White Clay Creek Study Act		7/24/1991	Sen Bicker, Joseph R., Jr. [DE]	11/26/1991	Senate Energy and Natural Resources
	[102nd]	S.1882	A bill to authorize extensions of time limitations in a FEREC-issued license		10/25/1991	Sen Ford, Wendell H. [KY]	5/1/1992	Senate Energy and Natural Resources
1992	[103rd]	H.R. 4150	To extend deadline under FPA construction of a hydroelectric project in Illinois.		2/4/1992	Rep Michael, Robert H. [IL-18]	3/18/1992	House Energy and Commerce
	[103rd]	H.R. 4171	The Finance and Economic Growth Act of 1992	103-3	2/14/1992	Rep Hansen, J. Dennis [IL-14]	2/14/1992	House Energy and Commerce
	[103rd]	H.R. 4587	Flow River in Michigan not subject to part 1 of the Federal Power Act.		3/18/1992	Rep Gephardt, Richard A. [MO-3]	3/25/1992	House Water and Power
	[103rd]	H.R. 4644	Eltha River Ecosystem and Fisheries Restoration Act, 1993		4/9/1992	Rep Condit, Garry A. [CA-11]	6/15/1992	House Energy and Commerce
	[103rd]	H.R. 4733	Energy and Waste Development Appropriations Act, 1993		8/11/1992	Rep Smith, Tim [AZ-4]	10/24/1992	House Energy and Commerce
	[103rd]	H.R. 5847	To extend deadline under FPA construction of a hydroelectric project in Oregon.		9/17/1992	Rep Smith, Robert [OR-3]	10/1/1992	House Appropriations, Senate Appropriations
	[103rd]	H.CON.RES.337	GAO conduct study economic impact of FEREC OMB No. 616 on sale-lease of natural gas		6/23/1992	Rep Smith, Robert [OR-3]	10/15/1992	House Energy and Commerce
	[103rd]	H.AMDT 335	H.R. 776 Amend energy exempt taxes from authority of FEREC to other transmission		3/20/1992	Rep Hall, Ralph M. [TX-4]	7/8/1992	House Energy and Commerce
	[103rd]	H.AMDT 369	H.R. 776 Amend provision FEREC from licensing hydro projects on rivers protected by State law		3/27/1992	Rep Miller, George [CA-7]	5/27/1992	House Energy and Commerce
	[103rd]	S.2166	H.R. 776 Amend FPA requires FEREC to give weight to State legislative actions in licensing		1/29/1992	Rep Dinsell, John D. [ME-16]	5/27/1992	Senate Energy and Commerce
	[103rd]	S.2167	National Energy Security Act of 1992		1/29/1992	Sen Johnston, J. Bennett [LA]	2/26/1992	Senate Energy and Commerce
	[103rd]	S.2392	Economic Growth Act of 1992		2/7/1992	Sen Dole, Robert J. [KS]	2/7/1992	Senate Finance
	[103rd]	S.2327	Eltha River Ecosystem and Fisheries Restoration Act		3/24/1992	Sen Reid, Henry [NY]	6/25/1992	Senate Energy and Natural Resources
	[103rd]	S.2607	Rational integrated resource planning by regulated holding companies and their regulators		4/2/1992	Sen Adams, Brock [WA]	9/30/1992	Senate Energy and Natural Resources
	[103rd]	S.2725	A bill to authorize extensions of time limitations for a FEREC-issued license		4/9/1992	Sen Johnston, J. Bennett [LA]	5/14/1992	Senate Energy and Natural Resources
	[103rd]	S.2981	Snake River Birds of Prey National Conservation Area in the State of Idaho		7/2/1992	Sen Crutcher, Alan [CA]	7/6/1992	Senate Energy and Natural Resources

Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Last Major Action	Committee
1993	[103rd]	S.3017	Wild and Scenic Rivers Act Great East Harbor in New Jersey		8/8/1992	Sen Bradley, Bill [NJ]	10/8/1992	Senate Energy and Natural Resources
	[103rd]	S. CON RES. 137	Study on impacts of Order No. 636 of FERC on endusers of natural gas		9/22/1992	Sen Wellstone, Paul D. [MN]	9/22/1992	Senate Energy and Natural Resources
	[103rd]	S. AMO 11442	S.2166 amends section existing FERC provision from the Government in the Sunshine Act		2/5/1992	Sen Wellstone, Paul D. [MN]	2/5/1992	Senate Energy and Natural Resources
	[103rd]	S. AMO 11433	S.2166 amends section existing FERC industry allow recovery of Gas Research Institute charges		2/5/1992	Sen Johnson, J. Bennett [LA]	2/5/1992	Senate Energy and Natural Resources
	[103rd]	S. AMO 11434	S.2166 amends section FERC industry allow recovery of Gas Research Institute charges		2/6/1992	Sen Wellstone, Paul D. [MN]	2/6/1992	Senate Energy and Natural Resources
	[103rd]	S. AMO 11608	S.2166 amends FERC industry allow recovery of Gas Research Institute charges		2/6/1992	Sen Johnson, J. Bennett [LA]	2/6/1992	Senate Energy and Natural Resources
1993	[103rd]	H.R. 333	Wild and Scenic River, North Fork of the Pivens River in Idaho		1/5/1993	Rep LaRocco, Larry [ID-1]	10/1/1994	House Natural Resources
	[103rd]	H.R. 1136	Extend deadline under FPA to convert hydroelectric project in Oregon		2/24/1993	Rep Smith, Robert [OR-2]	3/16/1993	House Energy and Commerce
	[103rd]	H.R. 1440	Energy and Water Development Appropriations Act, 1994	103-126	8/17/1993	Rep Bivitt, Tom [AL-4]	10/29/1993	House Appropriations; Senate Appropriations
	[103rd]	H.R. 3850	Maurice River in New Jersey as National Wild and Scenic River System	103-67	7/15/1993	Rep Hudes, William J. [NJ-5]	12/1/1993	House Natural Resources
	[103rd]	H.R. 3815	Pennington Wild and Scenic River Act	103-113	7/30/1993	Rep Johnson, Nancy L. [CT-6]	8/26/1994	House Natural Resources
	[103rd]	H.R. 3372	West Virginia River Conservation Act of 1993		11/30/1994	Rep Vento, Bruce F. [MN-4]	11/30/1994	House Natural Resources
	[103rd]	H.R. 3498	Great Falls Preservation and Redevelopment Act of 1994	1110-1093	11/10/1993	Rep Rain, Herbert C. [RI-2]	11/30/1994	House Natural Resources
	[103rd]	H.R. 3488	To extend deadline to certain hydroelectric projects under the FPA	1122-1993	11/22/1993	Rep Stansmire, George E. [IL-11]	1/3/1994	House Energy and Commerce
	[103rd]	H.R. RES. 137	FERC should refrain from rulemaking proceedings pursuant to Order No. 636		3/9/1993	Rep Cooper, Jim [TN-4]	3/9/1993	House Energy and Commerce
	[103rd]	S. 319	Red River Designation Act of 1993		1/28/1993	Sen McConnell, Mitch [KY]	5/6/1993	Senate Energy and Natural Resources
	[103rd]	S. 444	Multistate Utility Company Protection Act of 1994	3/20-1993	3/20/1993	Sen Byrnes, Dale [AR]	8/22/1994	Senate Energy and Natural Resources
	[103rd]	S. 633	Multistate Utility Company Protection Act of 1993		3/23/1993	Sen Riegle, Donald W. Jr. [MI]	3/23/1993	Senate Building, Housing, and Urban Affairs
	[103rd]	S. 930	Extend deadline under FPA applicable to construction of a hydroelectric project in Oregon		7/14/1993	Sen Hatfield, Mark O. [OR]	5/12/1993	Senate Energy and Natural Resources
	[103rd]	S. 1222	Blackstone River Valley National Heritage Corridor Amendment Act of 1994		7/14/1993	Sen Kennedy, Edward M. [MA]	11/30/1994	Senate Energy and Natural Resources
	[103rd]	S. 1332	Pennington Wild and Scenic River Act		7/30/1993	Sen Leuhmann, Joseph I. [CT]	10/27/1993	Senate Energy and Natural Resources
	[103rd]	S. 1342	Establish in the Department of the Interior the Essex Heritage District Commission		8/31/1993	Sen Kennedy, Edward M. [MA]	8/21/1994	Senate Energy and Natural Resources
	[103rd]	S. 1360	Designate portions of Maurice River in New Jersey as National Wild and Scenic River System		8/5/1993	Sen Bradley, Bill [NJ]	11/3/1993	Senate Energy and Natural Resources
	[103rd]	S. 1660	Great Falls Preservation and Redevelopment Act of 1993	1116-1993	11/16/1993	Sen Lautenberg, Frank R. [NJ]	7/19/1994	Senate Energy and Natural Resources
	[103rd]	S. RES. 39	FERC should refrain from rulemaking proceedings pursuant to Order No. 636		3/9/1993	Sen Wellstone, Paul D. [MN]	3/9/1993	Senate Energy and Natural Resources
1994	[103rd]	H.R. 5066	Energy and Water Development Appropriations Act, 1995	103-316	3/26/1994	Rep Bivitt, Tom [AL-4]	8/26/1994	House Appropriations; Senate Appropriations
	[103rd]	H.R. 4616	Natural Gas Pipeline Safety Improvement Act of 1994	6-21-1994	6/21/1994	Rep Phillips, Frank H. [IN-6]	7/5/1994	House Energy and Commerce
	[103rd]	H.R. 4643	Amend FPA authorizes FERC establish recovery of costs incurred by utilities under PURCA		6/24/1994	Rep Boehner, Rick [VA-6]	6/30/1994	House Energy and Commerce
	[103rd]	H.R. 4746	Anastasia Park Land Exchange and Wilderness Designations Act of 1994		7/12/1994	Rep Miller, George [CA-7]	10/8/1994	House Natural Resources
	[103rd]	H.R. 4911	To authorize extension of the time limitation for a FERC-issued hydroelectric license		8/11/1994	Rep Miller, Jay [VA-4]	8/11/1994	House Energy and Commerce
	[103rd]	H.R. 4983	To authorize extension of time limitations in a FERC-issued license		8/26/1994	Rep Molloy, Alan B. [WV-1]	8/16/1994	House Energy and Commerce
	[103rd]	H.R. 5031	Extend deadline under FPA applicable to construction of a hydroelectric project in Ohio		9/21/1994	Rep Sarver, Thomas C. [OH-14]	10/3/1994	House Energy and Commerce
	[103rd]	H.R. 5072	Extend deadline under FPA applicable to construction of hydroelectric projects in Arkansas		9/19/1994	Rep Lambert, Blanche M. [AR-1]	9/19/1994	House Energy and Commerce
	[103rd]	H.R. 5247	To provide for extensions and modifications of certain hydro and renewable energy programs		10/7/1994	Rep Sharp, Philip R. [IN-3]	10/7/1994	House Energy and Commerce
	[103rd]	H. AMO 1943	S.2334- Amends FERC to award construction time and hydroelectric projects		10/7/1994	Rep Sharp, Philip R. [IN-3]	10/7/1994	House Energy and Commerce
	[103rd]	S. 1818	Ohio & Erie Canal National Heritage Corridor Act of 1994	2-2-1994	2/2/1994	Sen Menashaum, Howard M. [OH]	10/5/1994	Senate Energy and Natural Resources
	[103rd]	S. 1822	Communications Act of 1994		3/23/1994	Sen Hollings, Ernest F. [SC]	9/14/1994	Senate Commerce, Science, and Transportation
	[103rd]	S. 1974	Extend deadline for hydroelectric projects under the Federal Power Act	3-22-1994	3/22/1994	Sen Simon, Paul [IL]	3/23/1994	Senate Energy and Natural Resources
	[103rd]	S. 2115	Amend FPA removes jurisdiction of FERC to license projects on fresh waters in Hawaii		6/13/1994	Sen Akaka, Daniel K. [HI]	6/17/1994	Senate Energy and Natural Resources
	[103rd]	S. 2219	Natural Gas Pipeline Safety Improvement Act of 1994		6/21/1994	Sen Lautenberg, Frank R. [NJ]	6/21/1994	Senate Commerce, Science, and Transportation
	[103rd]	S. 2234	Amend Mississippi River Corridor Study Commission Act of 1989 extend term of commission		6/23/1994	Sen Byrnes, Dale [AR]	11/30/1994	Senate Energy and Natural Resources
	[103rd]	S. 2263	A bill to authorize extension of the time limitation for a FERC-issued hydroelectric license		7/19/1994	Sen Gorton, Shafe [WA]	7/5/1994	Senate Energy and Natural Resources
	[103rd]	S. 2295	A bill to authorize extensions of time limitations in a FERC-issued license		7/19/1994	Sen Ford, Wendell H. [KY]	7/19/1994	Senate Energy and Natural Resources
	[103rd]	S. 2349	Amend Elwha River Ecosystem and Fisheries Restoration Act licensing hydroelectric projects		8/21/1994	Sen Gorton, Shafe [WA]	8/3/1994	Senate Energy and Natural Resources
	[103rd]	S. 2384	Federal Power Act Amendments of 1994		8/12/1994	Sen Johnson, J. Bennett [LA]	10/7/1994	Senate Energy and Natural Resources
	[103rd]	S. 2497	Extend deadline under FPA hydroelectric project in Pennsylvania		10/4/1994	Sen Specter, Arlen [PA]	10/4/1994	Senate Energy and Natural Resources
	[103rd]	S. 2502	Extend deadline under FPA construction of a hydroelectric project in Ohio		10/5/1994	Sen Glenn, John H. Jr. [OH]	10/5/1994	Senate Energy and Natural Resources
1999	[106th]	H.R. 459	Extend deadline under FPA for FERC Project No. 9401 the Mt. Hope Wapamowet Project	106-121	3/21/1999	Rep Franks, Robert P. [IN-11]	2/10/1999	House Commerce
	[106th]	H.R. 488	Northern Rockies Ecosystem Protection Act of 1999		3/2/1999	Rep Shays, Christopher [CT-4]	2/10/1999	House Resources
	[106th]	H.R. 497	Power Bill		3/10/1999	Rep Binn, Richard [NC-3]	7/22/1999	House Commerce
	[106th]	H.R. 471	Electric Power Consumer Rate Relief Act of 1999		3/10/1999	Rep Walsh, James T. [NY-21]	7/22/1999	House Commerce
	[106th]	H.R. 1117	Relief from utility interest and penalties on rebid competitively entered by FERC		3/18/1999	Rep Norcia, Jerry [MS-1]	7/29/1999	House Commerce
	[106th]	H.R. 1138	Emergency Protection Act		3/18/1999	Rep Sworn, Cliff [FL-6]	7/22/1999	House Commerce
	[106th]	H.R. 1282	Electric Facilities on Punahoa River in Michigan not required to be licensed by FERC		3/24/1999	Rep Rodden, Peter [MI-2]	3/30/2000	House Commerce
	[106th]	H.R. 1486	Power Marketing Administration Reform Act of 1999		4/20/1999	Rep Franks, Bob [NY-7]	7/22/1999	House Commerce
	[106th]	H.R. 1587	Electric Energy Empowerment Act of 1999		4/29/1999	Rep Sworn, Cliff [FL-6]	7/22/1999	House Commerce
	[106th]	H.R. 1649	Department of Energy Abolition Act		4/29/1999	Rep Thair, Todd [KS-4]	5/25/1999	House Commerce
	[106th]	H.R. 1828	Comprehensive Electricity Competition Act		6/17/1999	Rep Biller, Tom [VA-7]	7/22/1999	House Commerce
	[106th]	H.R. 2070	Electric Consumer Power To Choose Act of 1999		6/8/1999	Rep Largent, Steve [OK-1]	7/22/1999	House Commerce
	[106th]	H.R. 3333	Hydroelectric Licensing Process Improvement Act of 1999		6/24/1999	Rep Towns, William J. [NH-10]	5/16/2000	House Commerce
	[106th]	H.R. 3463	Public Utility Holding Company Act of 1999		6/25/1999	Rep Towns, William J. [NH-10]	7/22/1999	House Commerce
	[106th]	H.R. 4411	Department of Energy Elimination and National Security Protection Act of 1999		6/30/1999	Rep Rove, Edward R. [CA-37]	7/13/1999	House Commerce
	[106th]	H.R. 2489	Far Energy Competition Act of 1999		7/20/1999	Rep Pallone, Frank, Jr. [NJ-6]	8/3/1999	House Commerce
	[106th]	H.R. 2601	National Electricity Incentive Transmission Reliability Act		7/22/1999	Rep Wynn, Albert Russell [MD-4]	8/3/1999	House Commerce
	[106th]	H.R. 2601	Energy and Water Development Appropriations Act, 2000	106-40	7/23/1999	Rep Pocard, Ron [CA-48]	8/27/1999	House Appropriations
	[106th]	H.R. 2641	Electric Transmission, Worker, and Environmental Protection Act of 1999		7/29/1999	Rep Kucinich, Dennis J. [OH-10]	8/27/1999	House Commerce
	[106th]	H.R. 2786	Electric Transmission Act		8/5/1999	Rep Sarver, Tom [OH-14]	9/10/1999	House Commerce
	[106th]	H.R. 3884	Energy Act of 2000	106-469	9/21/1999	Rep Biller, Tom [VA-7]	9/10/1999	House Commerce

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Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Last Major Action	Committee	
2002	107th	H.R. 1974	Western States Energy Consumer Protection Act of 2001	523-2001	5/23/2001	Rep. Owens, Doug [CA-3]	5/23/2001	House Energy and Commerce	
	107th	H.R. 2028	World War I Veterans Medal of Honor Judicial Act	523-2001	6/8/2001	Rep. New, Robert W. [OH-18]	6/8/2001	House Energy and Commerce	
	107th	H.R. 2189	Final deadline under FPA construction of a hydroelectric project in Nevada	523-2001	6/22/2001	Rep. Wynn, Albert [ND-1]	6/22/2001	House Energy and Commerce	
	107th	H.R. 2184	Preserving Our World's Energy and Resource Act of 2001	523-2001	6/22/2001	Rep. Engel, Elmer L. [NY-17]	6/22/2001	House Energy and Commerce	
	107th	H.R. 2233	Amst amendments and local consumerist alternative provision of electricity	523-2001	6/22/2001	Rep. Nadler, Jared [NY-8]	6/22/2001	House Energy and Commerce	
	107th	H.R. 2274	Electricity Consumer Relief Act	523-2001	6/22/2001	Rep. Eshoo, Anna G. [CA-41]	6/22/2001	House Energy and Commerce	
	107th	H.R. 2311	Energy and Wire Developer Appropriations Act, 2002	107-66	6/26/2001	Rep. Cullinan, Sonny [AL-1]	6/26/2001	House Appropriations; Senate Appropriations	
	107th	H.R. 2351	Energy Market Monitoring Act	523-2001	7/16/2001	Rep. Horn, Stephen [CA-39]	7/16/2001	House Energy and Commerce	
	107th	H.R. 2382	Final deadline for construction of a hydroelectric project in Pennsylvania	523-2001	7/16/2001	Rep. Davis, Michael F. [PA-18]	7/16/2001	House Energy and Commerce	
	107th	H.R. 2412	Thermal Energy Self-Sufficiency Act	523-2001	7/20/2001	Rep. Rahall, Nick J. II [WV-3]	7/20/2001	House Energy and Commerce	
	107th	H.R. 2587	Energy Advancement and Conservation Act of 2001	523-2001	7/23/2001	Rep. Traxler, W. J. [OH-12]	7/23/2001	House Energy and Commerce	
	107th	H.R. 2757	To provide for the refund of certain overcharges for electricity in the Western States	523-2001	8/16/2001	Rep. Harkin, Judd [IA-5]	8/16/2001	House Energy and Commerce	
	107th	H.R. 2814	Interstate Transmission Act	523-2001	8/22/2001	Rep. Stivers, Tom [OH-14]	8/22/2001	House Energy and Commerce	
	107th	H.R. 3089	Renewable and Distributed Energy Net Metering Act	107-111	10/11/2001	Rep. Terry, Les [NE-2]	10/11/2001	House Energy and Commerce	
	107th	H.R. 3406	Electric Supply and Transmission Act	12-5-2001	12/5/2001	Rep. Burton, Joe [TX-6]	12/5/2001	House Energy and Commerce	
	107th	H.R. 3443	Final deadline for construction of a hydroelectric project in Pennsylvania	12-11-2001	12/11/2001	Rep. Hart, Melvin A. [PA-4]	12/11/2001	House Energy and Commerce	
	107th	H.R. 3555	United States Security (USA) Act of 2001	12-20-2001	12/20/2001	Rep. Manzoni, Robert [RI-1]	12/20/2001	House Energy and Commerce	
	107th	H.R. 3609	Public Safety Improvement Act of 2001	107-335	12/20/2001	Rep. Young, Don [AK]	12/20/2001	House Energy and Commerce	
	107th	H.R. 3687	H.R. A. Amendment to an extension in current law on interstate pipelines in California	122-2001	1/22/2001	Sen. Feinstein, Dianne [CA]	1/22/2001	Senate Energy and Natural Resources	
	107th	S. 26	Amend DOE Authorization Act imposes limitations on cost of electricity to consumers	122-2001	1/22/2001	Sen. Craig, Larry E. [ID]	1/22/2001	Senate Energy and Natural Resources	
	107th	S. 71	Hydroelectric Licensing Process Improvement Act of 2001	122-2001	1/22/2001	Sen. Boxer, Barbara [CA]	1/22/2001	Senate Energy and Natural Resources	
	107th	S. 80	California Electricity Consumers Relief Act of 2001	124-2001	1/24/2001	Sen. Smith, Gordon H. [OR]	1/24/2001	Senate Energy and Natural Resources	
	107th	S. 172	Electric Reliability Act	130-2001	1/30/2001	Sen. Shelby, Richard C. [AL]	1/30/2001	Senate Banking, Housing, and Urban Affairs	
	107th	S. 206	Public Utility Holding Company Act of 2001	107-335	2/1/2001	Sen. McCain, John [AZ]	2/1/2001	House Energy and Commerce	
	107th	S. 297	Direct FEERC to impose cost-of-service based rates on sales by public utilities of electricity	2/6-2001	2/6/2001	Sen. Markowski, Frank H. [AK]	2/6/2001	Senate Energy and Natural Resources	
	107th	S. 388	National Energy Security Act of 2001	2/6-2001	2/6/2001	Sen. Markowski, Frank H. [AK]	2/6/2001	Senate Energy and Natural Resources	
	107th	S. 389	National Energy Security Act of 2001	3/15-2001	3/15/2001	Sen. Graham, Bob [PA]	3/15/2001	Senate Energy and Natural Resources	
	107th	S. 520	Transition to Competition in Electric Industry Act	3/22-2001	3/22/2001	Sen. Brounman, Jeff [NM]	3/22/2001	Senate Energy and Natural Resources	
	107th	S. 597	Comprehensive and Balanced Energy Policy Act of 2001	3/26-2001	3/26/2001	Sen. Bond, Robert C. [MO]	3/26/2001	Senate Energy and Natural Resources	
	107th	S. 639	Final deadline for construction of hydroelectric projects in West Virginia	4/24-2001	4/24/2001	Sen. Feinstein, Dianne [CA]	4/24/2001	Senate Energy and Natural Resources	
	107th	S. 764	Direct FEERC impose just and reasonable demand rates on sales by public utilities	5/22-2001	5/22/2001	Sen. Lefforch, James M. [VT]	5/22/2001	Senate Energy and Natural Resources	
	107th	S. 933	Combined Heat and Power Advancement Act of 2001	6/14-2001	6/14/2001	Sen. Hahn, Jesse [NC]	6/14/2001	Senate Energy and Natural Resources	
	107th	S. 1043	Final deadline for construction of a hydroelectric project in North Carolina	6/20-2001	6/20/2001	Sen. Reid, Harry [NV]	6/20/2001	Senate Energy and Natural Resources	
	107th	S. 1068	Final deadline for construction of a hydroelectric project in Nevada	6/20-2001	6/20/2001	Sen. Bond, Barbara [CA]	6/20/2001	Senate Energy and Natural Resources	
	107th	S. 1171	Electricity Generation Relief Act of 2001	107-66	7/13/2001	Sen. Bond, Barbara [CA]	7/13/2001	Senate Appropriations	
	107th	S. 1231	Energy and Wire Developer Appropriations Act, 2002	7/14-2001	7/14/2001	Sen. Vilsa, Pat [OR]	7/14/2001	Senate Energy and Natural Resources	
	107th	S. 1403	Electricity Information, Efficiency, and Accountability Act	8/5-2001	8/5/2001	Sen. Covel, Brian [WA]	8/5/2001	Senate Energy and Natural Resources	
	107th	S. 1766	Energy Policy Act of 2002	12-5-2001	12/5/2001	Sen. Dworkin, Thomas A. [SD]	12/5/2001	Senate Energy and Natural Resources	
	107th	S. 1845	A bill to extend hydroelectric licenses in the State of Alaska	12/19-2001	12/19/2001	Sen. Stevens, Ted [AK]	12/19/2001	Senate Energy and Natural Resources	
	107th	S. 1832	Final deadline for construction of a hydroelectric project in Wisconsin	12/19-2001	12/19/2001	Sen. Thomas, Craig [WI]	12/19/2001	Senate Energy and Natural Resources	
	107th	S.AMDT-3	S. 217 direct FEERC to study natural gas pipeline transmission network in New England	2/8-2001	2/8/2001	Sen. Reed, Jack [RI]	2/8/2001	Senate Energy and Natural Resources	
	2002	107th	H.R. 3753	Reauthorize and transfer a hydroelectric license under FPA project in New York	2/13-2002	2/13/2002	Rep. Stenyoy, John E. [NY-21]	2/13/2002	House Energy and Commerce
		107th	H.R. 3754	Extend deadline under FPA for construction of two hydroelectric projects in New York	2/13-2002	2/13/2002	Rep. Stenyoy, John E. [NY-21]	2/13/2002	House Energy and Commerce
		107th	H.R. 3800	Federal Investment in Sustainable Hydrogen Act	2/27-2002	2/27/2002	Rep. Dingell, John D. [MI-16]	2/27/2002	House Energy and Commerce
		107th	H.R. 3952	Establish Office of Consumer Advocacy within DOE to represent consumer of electricity FEERC	3/13-2002	3/13/2002	Rep. DeFazio, Peter A. [OR-4]	3/13/2002	House Financial Services; House Energy and Commerce
		107th	H.R. 3970	Truth and Accountability in Accounting Act of 2002	3/14-2002	3/14/2002	Rep. Dingell, John D. [MI-16]	3/14/2002	House Energy and Commerce
		107th	H.R. 4785	Renewable license and extend commencement of construction Hydroelectric Project in Illinois	5/16-2002	5/16/2002	Rep. Stankus, John [IL-20]	5/16/2002	House Energy and Commerce
		107th	H.R. 4788	Final deadline for construction of a hydroelectric project in Connecticut	5/21-2002	5/21/2002	Rep. Stankus, John [IL-20]	5/21/2002	House Energy and Commerce
		107th	H.R. 5245	Western Electric Markets Reform Act of 2002	7/26-2002	7/26/2002	Rep. Jara, Darrell E. [CA-48]	7/26/2002	House Energy and Commerce
		107th	H.R. 5431	Energy and Wire Developer Appropriations Act, 2003	9/24-2002	9/24/2002	Rep. Cullinan, Sonny [AL-1]	9/24/2002	House Appropriations
107th		H.R. 5436	Final deadline for construction of a hydroelectric project in Oregon	107-376	10/7/2002	Rep. DeFazio, Peter A. [OR-4]	10/7/2002	House Energy and Commerce	
107th		H.R. 5583	To reauthorize and transfer a hydroelectric license under FPA to project in New York	10/10-2002	10/10/2002	Rep. Stenyoy, John E. [NY-21]	10/10/2002	House Energy and Commerce	
107th		H.R. 5614	Energy Markets Fraud Prevention and Consumer Protection Act of 2002	2/14-2002	2/14/2002	Rep. Dingell, John D. [MI-16]	2/14/2002	Senate Agriculture, Nutrition, and Forestry	
107th		S. 1931	A bill to provide regulatory oversight over energy trading markets, and for other purposes.	7/10-2002	7/10/2002	Sen. Feinstein, Dianne [CA]	7/10/2002	Senate Energy and Natural Resources	
107th		S. 2716	Modify authority of FEERC to conduct investigations, to increase the criminal penalties.	7/10-2002	7/10/2002	Sen. Feinstein, Dianne [CA]	7/10/2002	Senate Energy and Natural Resources	
107th		S. 2724	Provide regulatory oversight over energy trading markets	7/11-2002	7/11/2002	Sen. Feinstein, Dianne [CA]	7/11/2002	Senate Agriculture, Nutrition, and Forestry	
107th		S. 2784	Energy and Wire Developer Appropriations Act, 2003	108-7	7/24/2002	Sen. Reid, Harry [NV]	7/24/2002	Senate Appropriations	
107th		S. 2872	Renewable license for construction of a hydroelectric project in Illinois	8/1/2002	8/1/2002	Sen. Fitzgerald, Peter [IL]	8/1/2002	Senate Energy and Natural Resources	
107th		S. 2927	Final deadline for construction of a hydroelectric project in Oregon	107-376	9/12/2002	Sen. Smith, Gordon H. [OR]	9/12/2002	Senate Energy and Natural Resources	
107th		S.AMDT-3333	S. 317 amend Internal Revenue Code of 1986 FEERC or State electric revenue/expense policy.	4/24-2002	4/24/2002	Sen. Brown, Max [MT]	4/24/2002	Senate Energy and Natural Resources	
2003		Congress	H.R. 6	Energy Policy Act of 2003	4/7-2003	4/7/2003	Rep. Traxler, W. J. [OH-12]	4/7/2003	House Energy and Commerce
	108th	H.R. 337	To extend certain hydroelectric licenses in the State of Alaska	1/27-2003	1/27/2003	Rep. Young, Don [AK]	1/27/2003	House Energy and Commerce	
	108th	H.R. 397	Renewable and extend deadline for construction of a hydroelectric project in Illinois	108-12	1/28/2003	Rep. Stankus, John [IL-19]	1/28/2003	House Energy and Commerce	
	108th	H.R. 529	Renewable and transfer a hydroelectric license under the FPA to a hydroelectric project in NY	108-137	2/4/2003	Rep. Stenyoy, John E. [NY-20]	2/4/2003	House Energy and Commerce	
	108th	H.R. 864	Amend FPA provide for alternative conditions and filer rules in hydroelectric dam licenses	3/10-2003	3/10/2003	Rep. Owens, Doug [CA-3]	3/10/2003	House Energy and Commerce	
	108th	H.R. 1013	Amend FPA provide for alternative conditions and filer rules in hydroelectric dam licenses	3/10-2003	3/10/2003	Rep. Stankus, John [IL-19]	3/10/2003	House Energy and Commerce	
	108th	H.R. 1074	Final deadline for construction of a project in Connecticut	4/24-2003	4/24/2003	Rep. Stankus, John [IL-19]	4/24/2003	House Energy and Commerce	
	108th	H.R. 1164	Final deadline under FPA for construction of two hydroelectric projects in New York	3/17-2003	3/17/2003	Rep. Stenyoy, John E. [NY-20]	3/17/2003	House Energy and Commerce	

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Year	Congress	Bill No.	Bill Title	P.L.	Date Introduced	Sponsored by	Let Major Action	Committee		
2004	108th	HR 1254	Inch in Electricity Trading Act of 2003		3/12/2003	Rep. Walden, Greg [OR-2]	4/10/2003	House Energy and Commerce		
		HR 1272	Energy Markets Fraud Prevention and Consumer Protection Act of 2003		3/13/2003	Rep. Dinnell, John D. [ME-1]	3/24/2003	House Energy and Commerce		
		HR 1338	Amend FPA provides for Federal and State continuation of permitting for electric transmission		3/18/2003	Rep. Shadegg, John B. [AZ-2]	4/10/2003	House Energy and Commerce		
		HR 1341	Emergency Protection Act		3/18/2003	Rep. Swornin, Cliff [FL-9]	3/24/2003	House Energy and Commerce		
		HR 1370	Interstate Transmission Act		3/19/2003	Rep. Wynn, Albert Russell [MD-4]	4/10/2003	House Energy and Commerce		
		HR 1391	To extend the deadline under FPA for construction of the Mt. Hope Wapontow project		3/20/2003	Rep. Felthousen, Rodney P. [NY-11]	4/10/2003	House Energy and Commerce		
		HR 1463	Preventing Our World's Energy and Resources Act of 2003		3/25/2003	Rep. Engel, Eliot L. [NY-17]	4/10/2003	House Ways and Means		
		HR 1531	Energy Tax Policy Act of 2003		4/1/2003	Rep. McCrory, Jim [CA-4]	4/9/2003	House Ways and Means		
		HR 1637	Public Utility Holding Company Act of 2003		4/7/2003	Rep. Pickens, Charlie W. [MS-3]	4/10/2003	House Energy and Commerce		
		HR 1644	Energy Policy Act of 2003		4/7/2003	Rep. Barton, Joe [TX-6]	4/9/2003	House Energy and Commerce		
		HR 1644	To reauthorize and transfer a hydroelectric license under the FPA in New York		4/29/2003	Rep. Swanson, John E. [NY-20]	5/9/2003	House Energy and Commerce		
		HR 1866	Energy and Water Development Appropriations Act, 2004		10/6-13/2003	Rep. Robton, David L. [OH-7]	9/23/2003	House Appropriations		
		HR 3004	Electric Reliability Improvement Act of 2003		9/4/2003	Rep. Dinnell, John D. [ME-1]	9/23/2003	House Energy and Commerce		
		HR 3506	Amend FPA to authorize a State to regulate the sale of electricity solely within a State		11/18/2003	Rep. Filner, Bob [CA-5]	12/1/2003	House Energy and Commerce		
		HR 3509	House Energy Generation Act		11/18/2003	Rep. Liles, Jay [WA-1]	12/4/2003	House Energy and Commerce		
		HR 3514	Consolidated Appropriations Resolution, 2003		10/6-7/2003	Rep. Yoncos, C. W. Bill [FL-10]	7/31/2003	House Appropriations		
		HR 3520	Energy Policy Act of 2003		4/30/2003	See Domestic, Pass V. [NMI]	4/8/2003	Senate Energy and Natural Resources		
		HR 3520	Renounce and amend the deadline for construction of a hydroelectric project in Illinois		10/6-12/2003	See Fitzgerald, Peter [IL]	3/27/2003	Senate Energy and Natural Resources		
		HR 3475	Electric Transmission and Reliability Enhancement Act of 2003		3/4/2003	See Thomas, Chris [WV]	3/4/2003	Senate Agriculture, Nutrition, and Forestry		
		HR 3509	Energy Market Oversight Act		3/4/2003	See Feinstein, Dianne [CA]	3/4/2003	Senate Energy and Natural Resources		
		HR 3681	Electricity Market Manipulation Prevention Act		3/21/2003	See Curwell, Maria [WA]	3/21/2003	Senate Energy and Natural Resources		
		HR 3688	Transition to Competition in the Electric Industry Act		3/21/2003	See Graham, Bob [FL]	3/26/2003	Senate Energy and Natural Resources		
		HR 3716	Federal Power Act Amendment Act of 2003		3/26/2003	See Graham, Bob [FL]	3/26/2003	Senate Energy and Natural Resources		
		HR 3723	Electricity Generation Refund Act of 2003		3/26/2003	See Graham, Bob [FL]	3/26/2003	Senate Energy and Natural Resources		
		HR 3944	Amend FPA to provide for protection of electric utility customers and enhance wholesale		4/30/2003	See Bower, Barbara [CA]	4/30/2003	Senate Energy and Natural Resources		
		HR 3957	Energy Policy Act of 2003		5/6/2003	See Staley, Richard C. [AL]	5/6/2003	Senate Energy and Natural Resources		
		HR 3957	Energy and Water Development Appropriations Act, 2004		10/6-13/2003	See Domestic, Pass V. [NMI]	7/26/2003	Senate Appropriations		
		HR 3971	Amend PURPA of 1978 to require electric utilities to provide net metering service		7/26/2003	See Curwell, Maria [WA]	7/26/2003	Senate Energy and Natural Resources		
		HR 3971	Amend deadline for construction of a hydroelectric project in Wyoming		9/2/2003	See Thomas, Craig [WV]	6/7/2004	Senate Energy and Natural Resources		
		HR 31794	Electric Reliability Security Act of 2003		10/17/2003	See Jeffords, James M. [VT]	10/17/2003	Senate Energy and Natural Resources		
		HR 31794	SEC. 114 To strengthen FERC's authority to review public utility assets		7/29/2003	See Stabenow, JDF [MI]	7/29/2003	Senate Energy and Natural Resources		
		2004	108th	HR 4366	Efficient Energy Certified Technologies and Electricity Reliability (EFFECTER) Act of 2004		4/22/2004	Rep. Cunningham, Randy [CA-36]	5/17/2004	House Energy and Commerce
				HR 4413	Lowland National Gas Impact Terminal Development Act of 2004		5/20/2004	Rep. Lerry, Lee [NE-3]	6/7/2004	House Energy and Commerce
				HR 4503	Energy Policy Act of 2004		6/2/2004	Rep. Barton, Joe [TX-6]	6/17/2004	House Energy and Commerce
				HR 4567	Department of Homeland Security Appropriations Act, 2005		10/6-33/4	Rep. Rogers, Harold [KY-5]	7/6/2004	House Appropriations
				HR 4614	Energy and Water Development Appropriations Act, 2005		10/6-44/7	Rep. Robton, David L. [OH-7]	7/6/2004	House Appropriations
				HR 4667	Prevent Project Licensing Act of 2004		10/6-5/3	Rep. Duncan, John J., Jr. [TN-2]	10/6/2004	House Resources, House Energy and Commerce
				HR 4726	To prevent discriminatory taxation of natural gas pipelines property by the States		10/6-44/7	Rep. Carter, John R. [TX-31]	8/4/2004	House Energy and Commerce
				HR 4818	Consolidated Appropriations Act, 2005		10/6-44/7	Rep. Kolbe, Jim [AZ-3]	7/6/2004	House Appropriations
				HR 4837	Military Communication and Emergency Hierarchical Supplemental Appropriations Act, 2005		10/6-44/7	Rep. Laskinberg, Joe [NE-9]	7/6/2004	House Appropriations
				HR 5049	Requies FERC to provide the authority to amend to sell electricity at market rates		5/9/2004	Rep. Liles, Jay [WA-1]	9/20/2004	House Energy and Commerce
				HR 5369	Barbara Wise Gap National Recreation Area Natural Gas Pipeline Enhancement Act		11/16/2004	Rep. Starwood, Don [PA-10]	11/22/2004	House Resources
HR 5369	Electric Reliability Act of 2004				1/21/2004	See Curwell, Maria [WA]	1/21/2004	Senate Energy and Natural Resources		
HR 5314	Electricity Needs, Rate and Oversight New (ENRON) Act				1/21/2004	See Curwell, Maria [WA]	1/21/2004	Senate Energy and Natural Resources		
HR 5369	Energy Policy Act of 2003				3/25/2004	See Domestic, Pass V. [NMI]	2/23/2004	Senate Energy and Natural Resources		
HR 5369	Electric Reliability Act of 2004				3/25/2004	See Curwell, Maria [WA]	3/25/2004	Senate Energy and Natural Resources		
HR 5369	Final deadline for construction of a hydroelectric project in Alaska				4/8/2004	See Markovska, Lisa [AK]	10/6/2004	Senate Energy and Natural Resources		
HR 5311	Efficient Energy Certified Technologies and Electricity Reliability (EFFECTER) Act of 2004				4/8/2004	See Stevens, Thomas J. [ME]	4/8/2004	Senate Finance		
HR 5319	Hydro Project Licensing Act of 2004				4/8/2004	See Alexander, Lamar [TN]	4/8/2004	Senate Energy and Natural Resources		
HR 5363	Electricity Generating National Act of 2003				7/9/2004	See Bower, Barbara [CA]	7/9/2004	Senate Energy and Natural Resources		
HR 5369	Barbara Wise Gap National Recreation Area Natural Gas Pipeline Enhancement Act				10/6/2004	See Specter, Arlen [PA]	10/6/2004	Senate Energy and Natural Resources		
2005	109th			HR 3	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users		10/6-59	Rep. Young, Don [AK]	2/9/2005	House Transportation and Infrastructure
				HR 6	Energy Policy Act of 2005		10/6-58	Rep. Barton, Joe [TX-6]	2/23/2005	House Energy and Commerce
				HR 379	Lowland National Gas Act of 2005		1/23/2005	Rep. Lerry, Lee [NE-3]	2/23/2005	House Energy and Commerce
				HR 378	Electric Reliability Improvement Act of 2005		2/17/2005	Rep. Dingell, Jim D. [MI-13]	3/14/2005	House Energy and Commerce
				HR 571	Final deadline for construction of hydroelectric projects in Connecticut		3/17/2005	Rep. Sumner, Rob [CT-3]	11/13/2006	House Energy and Commerce
				HR 1318	Reauthorization and operation of coal hydroelectric facilities in Montana including charges FPA		3/17/2005	Rep. Klobuchar, Charis R. [MT]	3/22/2005	House Energy and Commerce
				HR 1369	To prevent certain discriminatory taxation of natural gas pipeline property		4/14/2005	Rep. Cannon, Chris [UT-3]	9/14/2006	House Energy and Commerce
				HR 1481	Interstate Transmission Act		4/14/2005	Rep. Wynn, Albert Russell [MD-4]	4/22/2005	House Energy and Commerce
				HR 1459	Amend FPA Federal and State continuation of permitting for electric transmission facilities		4/6/2005	Rep. Shadegg, John B. [AZ-2]	4/6/2005	House Energy and Commerce
				HR 1471	Amend FPA Federal and State continuation of permitting for electric transmission facilities		4/6/2005	Rep. Barton, Joe [TX-6]	4/6/2005	House Energy and Commerce
				HR 1474	Amend FPA Federal and State continuation of permitting for electric transmission facilities		4/6/2005	Rep. Thomas, William R. [CA-22]	4/6/2005	House Energy and Commerce
				HR 1834	Efficient Energy Certified Technologies and Electricity Reliability (EFFECTER) Act of 2005		4/26/2005	Rep. Cunningham, Randy [CA-36]	2/23/2005	House Energy and Commerce
				HR 341	Prevent restrictive application database to Trans-Alaska Pipeline Quality Bank valuation		10/6-103	Rep. Robton, David L. [OH-7]	2/13/2005	House Appropriations
				HR 5938	Energy and Water Development Appropriations Act, 2006		6/18/2005	Rep. Duncan, John J., Jr. [TN-2]	7/1/2005	House Appropriations
				HR 3174	Barbara Wise Gap National Recreation Area Natural Gas Pipeline Enhancement Act		10/6-116	Rep. Starwood, Don [PA-10]	11/13/2005	House Resources
				HR 3184	William New York National Recreation Area Natural Gas Pipeline Enhancement Act		10/6-116	Rep. Starwood, Don [PA-10]	11/13/2005	House Resources
				HR 3489	Stovall Br. Adams's Society Act of 2005		9/28/2005	Rep. Harkin, Bill [IA-5]	10/24/2005	House Energy and Commerce
				HR 4377	Mohawk River Hydroelectric Project Licensing Act of 2005		11/17/2005	Rep. McNulty, Michael R. [NY-21]	12/2/2005	House Energy and Commerce

Table 16 Continues on to the Next Page

[109th]	H.R. 4377 :	To amend the time required for construction of a hydroelectric project, and for other purposes.	109-393	11/17/2005	Rep. Ose, C. L. (Bunch) [ID-1]	House Energy and Commerce
[109th]	H.R. 4384 :	Energy For Our Future Act	11/17/2005	Rep. Shays, Christopher [CT-4]	12/16/2005	House Energy and Commerce
[109th]	H.R. 4417 :	To provide for the reinstatement of a license for a certain Federal Energy Regulatory project.	11/18/2005	Rep. Molloy, Alan B. [NY-11]	9/27/2006	House Energy and Commerce
[109th]	S.10 :	Energy Policy Act of 2005	6/9/2005	Sen. D'Amico, Peter V. [NY-4]	8/8/2005	Senate Energy and Natural Resources
[109th]	S.33 :	Electricity Needs Rule and Oversight Now (ENRON) Act	1/24/2005	Sen. Cornwell, Mark [WA]	1/24/2005	Senate Energy and Natural Resources
[109th]	S.176 :	Final deadline for construction of a hydroelectric project in Alaska	1/24/2005	Sen. Murkowski, Lisa [AK]		Senate Energy and Natural Resources
[109th]	S.34 :	Final deadline for construction of a hydroelectric project in Wyoming	1/24/2005	Sen. Thomas, Craig [WY]		Senate Energy and Natural Resources
[109th]	S.390 :	Coastal Zone Enhancement Reauthorization Act of 2005	2/19/2005	Sen. Snow, Olympia J. [ME]	9/15/2005	Senate Commerce, Science, and Transportation
[109th]	S.436 :	Electric Reliability Security Act of 2005	2/17/2005	Sen. Jeffords, James M. [VT]	2/17/2005	Senate Energy and Natural Resources
[109th]	S.496 :	Electric Transmission Act of 2005	3/2/2005	Sen. Burr, Richard [NC]	3/2/2005	Senate Energy and Natural Resources
[109th]	S.598 :	Energy Markets Improvement Act of 2005	3/9/2005	Sen. Feinstein, Dianne [CA]	3/9/2005	Senate Agriculture, Nutrition, and Forestry
[109th]	S.596 :	Electric Transmission and Reliability Enhancement Act of 2005	3/10/2005	Sen. Thomas, Craig [WY]	3/10/2005	Senate Energy and Natural Resources
[109th]	S.680 :	Efficient Energy Certified Technologies and Electric Reliability (EFFECER) Act of 2005	3/17/2005	Sen. Snow, Olympia J. [ME]	3/17/2005	Senate Energy and Natural Resources
[109th]	S.82 :	Prevent retroactive application of changes to Trans-Alaska Pipeline Quality Bank valuation	4/17/2005	Sen. Murkowski, Lisa [AK]	4/17/2005	Senate Finance
[109th]	S.870 :	Electricity Needs Rule and Oversight Now (ENRON) Act	4/21/2005	Sen. Cornwell, Mark [WA]	4/21/2005	Senate Energy and Natural Resources
[109th]	S.1031 :	Electric Reliability Act of 2005	5/12/2005	Sen. Cornwell, Mark [WA]	5/12/2005	Senate Energy and Natural Resources
[109th]	S.1034 :	Environmentally Responsible Workforce Act of 2005	5/12/2005	Sen. Alexander, Lamar [TN]	5/12/2005	Senate Energy and Natural Resources
[109th]	S.1090 :	Legalized Natural Gas Import Terminal Authorization Act	5/20/2005	Sen. Feinstein, Dianne [CA]	5/20/2005	Senate Energy and Natural Resources
[109th]	S.1201 :	A bill to prevent certain discriminatory taxation of natural gas pipeline property.	6/8/2005	Sen. Cornwell, John [TX]	6/8/2005	Senate Finance
[109th]	S.1208 :	Environmentally Responsible Workforce Act of 2005	6/9/2005	Sen. Alexander, Lamar [TN]	6/9/2005	Senate Energy and Natural Resources
[109th]	S.1310 :	Dalhousie Water Gap National Recreation Area Improvement Act	6/24/2005	Sen. Santorum, Rick [PA]	3/30/2006	Senate Energy and Natural Resources
[109th]	S.1377 :	Facilities transfer of Hydroelectric Plant Number 1 to the city of Spearfish, South Dakota	7/29/2005	Sen. Johnson, Tim [SD]	7/29/2005	Senate Energy and Natural Resources
[109th]	S.1596 :	Amend PURPA of 1978 to require electric utilities to provide an insurance service.	11/17/2005	Sen. Cornwell, Mark [WA]	11/17/2005	Senate Energy and Natural Resources
[109th]	S.2038 :	Provide reinstatement of a license for a certain FERC project in Idaho.	11/17/2005	Sen. Brist, Robert C. [WV]	11/17/2005	Senate Energy and Natural Resources
[109th]	S.2045 :	Final time for construction of a hydroelectric project in Idaho	11/17/2005	Sen. Crick, Larry E. [ID]	7/11/2006	Senate Energy and Natural Resources
[109th]	S.2070 :	Repeal New Hydroelectric Project Licensing Act of 2003	11/18/2005	Sen. Schumer, Charles E. [NY]	9/21/2006	Senate Energy and Natural Resources
[109th]	S.AMDT 870 :	H.R. 6 requires FERC to complete its investigation and order refund on unit rate, California	6/22/2005	Sen. Boxer, Barbara [CA]	6/22/2005	Senate Energy and Natural Resources
[109th]	H.R. 5055 :	Mount Hood Stewardship Legacy Act	3/29/2006	Rep. Walden, Greg [OR-2]	9/27/2006	House Resources, House Agriculture
[109th]	H.R. 5427 :	Energy and Water Development Appropriations Act, 2007	5/19/2006	Rep. Hiron, David L. [OR-7]	6/29/2006	House Appropriations, Senate Appropriations
[109th]	H.R. 5566 :	Transfer Hydroelectric Plant Number 1 to the city of Spearfish, South Dakota	6/8/2006	Rep. Harsh, Stephen [SD]	9/7/2006	House Energy and Commerce, House Resources
[109th]	H.R. 5823 :	Protecting Communities from Power Line Abuse Act	7/18/2006	Rep. Kelly, Sue W. [NY-19]	8/1/2006	House Energy and Commerce
[109th]	H.R. 6110 :	Require persons seeking FERC approval for log facility to identify employees	9/19/2006	Rep. Ruppelberger, C. A. [MD-2]	9/27/2006	House Energy and Commerce
[109th]	H.R. 6368 :	Study to Improve Accuracy of Federal Oil, Condensate, Natural Gas Royalties Act of 2006	12/7/2006	Rep. Maloney, Carolyn B. [NY-14]	12/11/2006	House Resources
[109th]	H.AMDT 924 :	H.R. 5437 prohibit funds available from being used by FERC for Broadwater Energy proposal.	5/24/2006	Rep. Bishop, Timothy H. [NY-11]	5/24/2006	House Resources
[109th]	H.AMDT 928 :	H.R. 5437 amendment prohibit the use of funds FERC to enforce a termination payment	5/24/2006	Rep. Bishop, Jrv [WA-1]	5/24/2006	House Resources
[109th]	S.2287 :	Charly deadline relating to construction of hydroelectric projects in New York	2/16/2006	Sen. Schumer, Charles E. [NY]	2/16/2006	Senate Energy and Natural Resources
[109th]	S.2755 :	Energy PRICE Act	5/5/2006	Sen. Thomas, Craig [WY]	5/5/2006	Senate Finance
[109th]	S.3851 :	Provide for extensions of preliminary permit by FERC for hydroelectric projects in Alaska.	9/6/2006	Sen. Murkowski, Lisa [AK]	9/21/2006	Senate Energy and Natural Resources
[109th]	S.4019 :	Require persons seeking approval for log facility to identify employees	9/29/2006	Sen. Boxer, Barbara [CA]	9/29/2006	Senate Energy and Natural Resources

Sources: Library of Congress website Thomas at: <http://thomas.loc.gov/home/home.jsp>
 (To find the legislation I searched using "Federal Energy Regulatory Commission," limiting the search results by year.)

Table 17. Numbers of Proposed Bills Affecting FERC by Year and Session*

<u>Year</u>	<u>Number of Bills</u>	<u>Bills Per Session</u>
1977	10	
1978	13	23
1979	37	
1980	26	63
1981	25	
1982	36	61
1983	63	
1984	29	92
1985	43	
1986	27	70
1987	37	
1988	17	54
1989	38	
1990	15	53
1991	37	
1992	24	61
1993	19	
1994	22	41
1995	48	
1996	18	66
1997	29	
1998	26	55
1999	47	
2000	25	72
2001	62	
2002	19	81
2003	39	
2004	20	59
2005	46	
2006	12	58
2007	36	
2008	23	59

Source: Library of Congress website Thomas at: <http://thomas.loc.gov/home/thomas.php>.

*Legislation produced by search using Federal Energy Regulatory Commission, limiting the search results by year.

Table 18. Statutes Specifically Referencing FERC 1977 to 1986, 1989 to 1994, & 1999 to 2006

Congress	Bill No.	Bill Title	P. L.	Date Introduced	Sponsored by	Last Major Action	Committee
[97th]	H.R. 4018	Public Utility Regulatory Policies Act	95-617	2/24/1977	Rep Evans, Thomas B., Jr. [DE]	11/9/1978	House Ways and Means; Senate Finance
[97th]	H.R. 5146	Powdermill and Industrial Fuel Use Act	95-620	3/16/1977	Rep McEwen, Robert C. [NY-20]	11/9/1978	House Ways and Means; Senate Finance
[97th]	H.R. 4804	Department of Energy Organization Act	S. 826	5/2/1977	Rep Brooks, Jack B. [TX-9]	6/3/1977	House Government Operations; House Post Office and Civil Service
[97th]	S. 826	Department of Energy Organization Act	95-591	3/1/1977	Sen Ribicoff, Abraham A. [CT]	8/4/1977	Senate Governmental Affairs
[98th]	H.R. 4289	Supplemental Appropriations Act, 1979	96-38	5/31/1979	Rep Whitten, James L. [MS-1]	7/25/1979	House Appropriations; Senate Appropriations
[98th]	H.R. 4588	Energy and Water Development Appropriation Act, 1980	96-69	6/7/1979	Rep Berrill, Tom [AL-4]	9/25/1979	House Appropriations; Senate Appropriations
[98th]	S. 885	Pacific Northwest Electric Power Planning and Conservation Act	96-501	4/5/1979	Sen Jackson, Henry M. [WA]	12/5/1980	Senate Energy and Natural Resources; House Interior and Insular Affairs
[98th]	S. 951	Energy Security Act	96-394	4/9/1979	Sen Proxmire, William [WI]	6/30/1980	Senate Energy and Natural Resources
[98th]	S. 1030	Emergency Energy Conservation Act of 1979	96-102	4/26/1979	Sen Johnston, J. Bennett [LA]	11/5/1979	Senate Energy and Natural Resources; House Interstate and Foreign Commerce
[98th]	H.R. 7542	Supplemental Appropriations and Reversion Act of 1980	96-304	6/11/1980	Rep Whitten, James L. [MS-1]	7/8/1980	House Appropriations; Senate Appropriations
[98th]	H.R. 7590	Energy and Water Development Appropriation Act, 1981	96-367	6/16/1980	Rep Berrill, Tom [AL-4]	10/1/1980	House Appropriations; Senate Appropriations
[97th]	H.R. 3512	Supplemental Appropriations and Reversion Act, 1981	97-12	5/8/1981	Rep Whitten, James L. [MS-1]	6/5/1981	House Appropriations; Senate Appropriations
[97th]	H.R. 4144	Energy and Water Development Appropriation Act, 1982	97-88	7/14/1981	Rep Berrill, Tom [AL-4]	11/1/1985	House Appropriations; Senate Appropriations
[97th]	S. 875	A bill to authorize the generation of electric power at Palo Verde Dam, California	97-41	4/2/1981	Sen Hatchman, Samuel John [CA]	8/14/1981	Senate Energy and Natural Resources
[97th]	S. 1573	Lake Oswego, Oregon, hydroelectric facility from part I of the Federal Power Act	97-545	7/31/1981	Sen Hatfield, Mark O. [OR]	10/15/1982	Senate Energy and Natural Resources
[98th]	H.R. 3069	Supplemental Appropriations Act, 1983	98-63	5/18/1983	Rep Whitten, James L. [MS-1]	7/30/1983	House Appropriations; Senate Appropriations
[98th]	H.R. 3132	Energy and Water Development Appropriation Act, 1984	98-50	5/24/1983	Rep Berrill, Tom [AL-4]	7/14/1983	House Appropriations; Senate Appropriations
[98th]	H.R. 5653	Appropriations for energy and water development FY ending September 30, 1985	98-360	5/15/1984	Rep Berrill, Tom [AL-4]	7/16/1984	House Appropriations; Senate Appropriations
[98th]	H.R. 3577	Supplemental Appropriations Act, 1985	99-83	5/22/1985	Rep Whitten, James L. [MS-1]	8/15/1985	House Appropriations; Senate Appropriations
[98th]	H.R. 3959	Appropriations for energy and water development FY ending September 30, 1986	99-141	7/10/1985	Rep Berrill, Tom [AL-4]	11/1/1985	House Appropriations; Senate Appropriations
[98th]	S. 476	Electric Consumer Protection Act of 1986	99-495	2/7/1985	Sen Walsh, Malcolm [WV]	10/16/1986	Senate Energy and Natural Resources
[98th]	H.R. 3056	Permit retesting holding companies to own certain interests in qualifying cogeneration facilities	99-555	6/19/1986	Rep Bryant, John W. [TX-5]	10/27/1986	House Energy and Commerce
[98th]	H.R. 3500	Ombudsman Reauthorization Act of 1986	99-569	7/31/1986	Rep Gray, William H., III [PA-2]	10/21/1986	House Budget
[101st]	H.R. 3696	Energy and Water Development Appropriations Act, 1990	101-101	6/20/1989	Rep Berrill, Tom [AL-4]	9/29/1989	House Appropriations; Senate Appropriations
[101st]	S. 388	Federal Energy Regulatory Commission Member Term Act of 1990	101-271	2/8/1989	Sen Bingaman, Jeff [NM]	4/17/1990	Senate Energy and Natural Resources
[101st]	S. 750	A bill extending time limitations on certain projects	101-135	4/17/1989	Sen Bumpers, Dale [AR]	11/15/1989	Senate Energy and Natural Resources
[101st]	H.R. 3019	Energy and Water Development Appropriations Act, 1991	101-514	6/13/1990	Rep Berrill, Tom [AL-4]	11/5/1990	House Appropriations; Senate Appropriations
[102nd]	H.R. 276	Energy Policy Act of 1992	102-486	2/4/1991	Rep Sham, Philip R. [DC-2]	10/24/1992	House Energy and Commerce
[102nd]	H.R. 2437	Energy and Water Development Appropriations Act, 1993	102-184	5/23/1991	Rep Berrill, Tom [AL-4]	8/17/1991	House Appropriations; Senate Appropriations
[102nd]	H.R. 5373	Energy and Water Development Appropriations Act, 1993	102-377	6/11/1992	Rep Berrill, Tom [AL-4]	10/2/1992	House Appropriations; Senate Appropriations
[103rd]	H.R. 3445	Energy and Water Development Appropriations Act, 1994	103-136	6/17/1993	Rep Berrill, Tom [AL-4]	10/28/1993	House Appropriations; Senate Appropriations
[103rd]	H.R. 4596	Energy and Water Development Appropriations Act, 1995	103-316	5/26/1994	Rep Berrill, Tom [AL-4]	8/28/1994	House Appropriations; Senate Appropriations
[106th]	H.R. 2605	Energy and Water Development Appropriations Act, 2000	106-60	7/23/1999	Rep Pickard, Ron [CA-48]		House Appropriations
[106th]	H.R. 2884	Energy Act of 2000	106-469	9/21/1999	Rep Bliley, Tom [VA-7]		House Commerce
[106th]	S. 1186	Energy and Water Development Appropriations Act of 1999	106-60	6/2/1999	Sen Domenici, Pete V. [NM]	7/28/1999	Senate Appropriations
[107th]	H.R. 3311	Energy and Water Development Appropriations Act, 2002	107-66	6/26/2001	Rep Culbhan, Sonny [AL-1]		House Appropriations; Senate Appropriations
[107th]	S. 1171	Energy and Water Development Appropriations Act, 2003	107-66	7/13/2001	Sen Reid, Harry [NV]	11/12/2001	Senate Appropriations
[107th]	H.R. 5431	Energy and Water Development Appropriations Act, 2003	108-7	9/24/2002	Rep Culbhan, Sonny [AL-1]	9/24/2002	House Appropriations
[107th]	S. 2784	Energy and Water Development Appropriations Act, 2003	108-7	7/24/2002	Sen Reid, Harry [NV]	7/24/2002	Senate Appropriations
[108th]	H.R. 2754	Energy and Water Development Appropriations Act, 2004	108-137	7/16/2003	Rep Hobson, David L. [OH-7]		House Appropriations
[108th]	H.J. RES. 2	Consolidated Appropriations Resolution, 2003	108-7	1/7/2003	Rep Young, C. W. Bill [FL-10]		House Appropriations
[108th]	S. 1424	Energy and Water Development Appropriations Act, 2004	108-137	7/12/2003	Sen Domenici, Pete V. [NM]		Senate Appropriations
[108th]	H.R. 4614	Energy and Water Development Appropriations Act, 2005	108-447	6/18/2004	Rep Hobson, David L. [OH-7]	7/6/2004	House Appropriations; Senate Appropriations
[108th]	H.R. 4818	Consolidated Appropriations Act, 2005	108-447	7/13/2004	Rep Koehne, Jim [AZ-3]		House Appropriations; Senate Appropriations
[109th]	H.R. 6	Energy Policy Act of 2005	109-58	4/18/2005	Rep Barton, Joe [TX-6]		House Energy and Commerce
[109th]	H.R. 640	Energy Policy Act of 2005	109-58	4/14/2005	Rep Barton, Joe [TX-6]	8/8/2005	House Energy and Commerce
[109th]	H.R. 2419	Energy and Water Development Appropriations Act, 2006	109-103	5/18/2005	Rep Hobson, David L. [OH-7]		House Appropriations; Senate Appropriations
[109th]	S. 10	Energy Policy Act of 2005	109-58	6/9/2005	Sen Domenici, Pete V. [NM]	8/8/2005	Senate Energy and Natural Resources

Source: The Library of Congress website Thomas at <http://thomas.loc.gov/home/htocast.php>. To find the legislation provided above I searched using "Federal Energy Regulatory Commission" limiting the search results by year.

Table 19. FERC Orders Related to Private Electric Utilities, 1977 - 1986, 1990 - 1994, & 2000 - 2006

Order No.	Title	Year
Order No. 1	Providing for the continuation of functions vested in, or delegated to, the Federal Energy Regulatory Commission	1977
Order No. 4	Exemption of certain emergency gas transportation arrangements during the coal emergency	1978
Order No. 5	Amendments to uniform systems of accounts for public utilities and licensees Forms 1, 1-F, 2, 2-A, and 9	1978
Order No. 8	Establishment of rules relating to investigations	1978
Order No. 22	Order denying petition to limit the distribution of information collected on form 423 and terminating proposed rulemaking	1979
Order No. 32	Procedure for submission of settlement agreements	1979
Order No. 37	Determination of power plant design capacity	1979
Order No. 38	Delegation of the Commission's authority to various staff and Office Directors	1979
Order No. 39	Amendments to the notice requirements of the Federal Power Act	1979
Order No. 47	Rate of interest on amounts held subject to refund	1979
Order No. 48	Collection of cost of service information under section 133 of PURPA of 1978	1979
Order No. 61	Electric utility reporting on measures to implement conservation of natural resources	1979
Order No. 67	Public utility filing requirement under section 211 of PURPA of 1978	1980
Order No. 69	Final rule implementing Section 210 of PURPA of 1978: Small power production and cogeneration facilities rates	1980
Order No. 70	Final rule requirements and procedures for qualifying facility status designation	1980
Order No. 75	Filing requirements interlocking positions under Section 211 of PURPA of 1978	1980
Order No. 76	Final rule section 213 of PURPA of 1978: Exempts of small conduit hydroelectric facilities from Part I of Federal Power Act	1980
Order No. 77	Briefs on exceptions and briefs opposing exceptions-standard format and summary	1980
Order No. 84	Filing of rate schedules; regulations limiting percentage adders in electric rates for transmission services	1980
Order No. 91	Revised requirements filing changes electric rate schedules and submission of supporting data	1980
Order No. 104	Section 206(d) exemption mechanical cogeneration facilities from incremental pricing provisions of NGPA of 1978	1980
Order No. 106	Exempts small hydro projects from all or part of Part I of the Federal Power Act	1980
Order No. 135	Small power production and cogeneration facilities eligibility, rates and exemptions geothermal small power production	1981
Order No. 140	Public utility filing requirement, Format no. FERC 561, annual report of interlocking positions	1981
Order No. 144	Tax normalization reflecting timing differences for ratemaking and income tax purposes	1981
Order No. 147	Delegation of the Commission's authority to the Office Directors	1981
Order No. 182	Application for authorization issuance of securities or the assumption of liabilities	1981
Order No. 185	Regulations governing applications for license for minor water power projects 5 megawatts or less	1981
Order No. 200	Revise FERC forms no. 1, annual report of electric utilities, licensees and others (class A and class B)	1982
Order No. 201	Final rule to discontinue monthly power plant report: Form No. 4	1982
Order No. 202	Requirements of part I of the Federal Power Act small hydroelectric power projects 5 megawatts or less	1982
Order No. 224	Delegation of authority	1982
Order No. 225	Revision of rules of practice and procedure to expedite trial-type hearings	1982
Order No. 231	Extension of filing date under Section 133 of PURPA	1982
Order No. 255	Amendments to regulations governing case-by-case exemption of small hydroelectric projects from FPA	1982
Order No. 258	Revisions to the uniform system of accounts	1982
Order No. 264	Final rule to amend monthly report of cost and quality of fuels for electricity plants: Form No. 423	1982
Order No. 265	Discontinuance of Form No. 5, electric utility company monthly report	1982
Order No. 281	Extension of filing deadline date under Section 133 of PURPA	1983
Order No. 282	Revision of form no. 12, power system statement	1983
Order No. 298	Construction work in progress for public utilities	1983
Order No. 303	Interpretation of authority to suspend initial rate schedules	1983
Order No. 335	Revisions to regulations on retention of records by public utilities	1983
Order No. 352	Treatment of purchased power in the fuel cost adjustment clause for electric utilities	1983
Order No. 353	Exemption from and revisions to procedures collection of information concerning cost of providing retail electric service	1983
Order No. 374	Application for authority to hold interlocking positions requiring approval under Section 305(b) of the Federal Power Act	1984
Order No. 375	Rules of practice and procedure: Reconsideration of initial decision	1984
Order No. 379	Annual charges for use of government dams and other structures under Part I of the Federal Power Act	1984
Order No. 388	Delegation to Office Directors	1984
Order No. 389	Generic determination of rate of return on common equity for electric utilities,	1984
Order No. 395	Fees applicable to general activities	1984
Order No. 401	Shortages of electric energy and capacity under Section 206 of the PURPA of 1978	1984
Order No. 418	Amendments to FERC Form No. 1, require filing of Form No. EIA-714, and elimination of rule for FERC Form No. 12	1985
Order No. 419	Deletion of a 1987 filing requirement for FERC Form No. 80	1985
Order No. 420	Generic determination on rate of return on common equity for public utilities	1985
Order No. 435	Fees applicable to electric utilities, cogenerators, and small power producers	1985
Order No. 442	Generic determination of rate of return on common equity for public utilities	1985
Order No. 446	Automatic authorization for holding positions that require Commission approval under Section 305 (B) FPA	1986
Order No. 448	Construction work in progress -- anticompetitive implications	1986
Order No. 458	Form EIA-767, operation and design report and FERC Form No. 549-ST transportation reports	1986
Order No. 461	Generic determination of rate of return on common equity for public utilities	1986
Order No.	Title	Year
Order No. 518	Deletion of procedural regulations for transmission electricity to a foreign country and for emergency connection of facilities	1990
Order No. 521	Revision of formula for determining filing fees, Interim rule	1990
Order No. 527	Revision of rate schedule filings under sections 205 and 206 of the Federal Power Act	1990
Order No. 529	Amendments to FERC Form Nos. 1 and 1-F, and annual charges, and fuel cost and purchased economic power adjustment clauses	1990
Order No. 530	Streamlining commission procedures for review of staff action	1990
Order No. 531	Modification of regulations on Form No. EIA-714, annual electric power system report	1990
Order No. 532	Generic determination of rate of return on common equity for public utilities	1990
Order No. 534	Rescission of regulations pertaining to utility requirement to report on Form No. EIA-767	1991
Order No. 535	Change of name of Form No. EIA-714, Annual electric control and planning area report	1991
Order No. 538	Generic determination of rate of return on common equity for public utilities	1992
Order No. 541	Eliminating unnecessary regulation, Final rule and policy statement	1992
Order No. 545	Streamlining electric power regulation	1992
Order No. 549	Repeal of certain standards of conduct provisions in part 3c	1993
Order No. 550	Filing requirements and ministerial procedures for persons seeking exempt wholesale generator status	1993
Order No. 552	Revisions to uniform systems of accounts for allowances under the Clean Air Act Amendments of 1990 and assets and liabilities and to Form Nos. 1, 1-F, 2 and 2-A	1993
Order No. 558	Reporting under section 213(b) of the Federal Power Act and under the Energy Policy Act of 1992, and conforming and other changes to Form No. FERC-714	1993
Order No. 560	Provisions for applications for transmission services under section 211 of the Federal Power Act	1993
Order No. 564	Electronic filing of FERC Form No. 1 and delegation to Chief Accountant	1993
Order No. 568	Filing requirements for public utility and interstate natural gas company rate schedules and tariffs	1994
Order No. 569	Interpretation and amendment clarifying exemption to qualifying facilities from the Federal Power Act	1994

Table 19 Continues on to the Next Page

Order No. 570	Authorizing delegation to the Secretary in proceedings under Section 210 or Section 211 of the Federal Power Act	1994
Order No. 574	Electronic filing of FERC Form No. 1 and delegation to Chief Accountant	1994
Order No.	Title	Year
Order No. 614	Designation of Electric Rate Schedule Sheets	2000
Order No. 617	Preservation of Records of Public Utilities, Licensees, Natural Gas Companies, & Oil Pipeline Cos.	2000
Order No. 618	Depreciation Accounting	2000
Order No. 619	Electronic Filing of Documents	2000
Order No. 638	Open Access Same-Time Information System and Standards of Conduct	2000
Order No. 641	Revision of Annual Charges Assessed to Public Utilities	2000
Order No. 642	Revised Filing Requirements Under Part 33 of the Commission's Regulations	2000
Order No. 2000-A	Regional Transmission Organizations	2000
Order No. 622	Electronic Filing of FERC Form No. 423	2001
Order No. 623	Amendment to Rules Governing Off-the-Record Communications	2001
Order No. 626	Electronic Filing of FERC Form 1, and Elimination of Certain Designated Schedules In FERC Form Nos. 1 and 1-F	2002
Order No. 627	Accounting and Reporting of Financial Instruments, Comprehensive Income, Derivatives and Hedging Activities	2002
Order No. 891	Electronic Registration	2002
Order No. 2001	Revised Public Utility Filing Requirements	2002
Order No. 629	Amendment to Delegations of Authority to the Chief Administrative Law Judge	2003
Order No. 630	Critical Energy Infrastructure Information	2003
Order No. 631	Accounting, Financial Reporting, and Rate Filing Requirements for Asset Retirement Obligations	2003
Order No. 632	Delegations of Authority	2003
Order No. 634	New Reporting Requirements for Utilities in Cash Management Programs	2003
Order No. 643	Amendments to Confirm Regulations With Order No. 630 (Critical Energy Infrastructure Information Final Rule)	2003
Order No. 2003	Standardization of Generator Interconnection Agreements and Procedures	2003
Order No. 2004	Standards of Conduct for Transmission Providers	2003
Order No. 646	Quarterly Financial Reporting and Revisions to the Annual Reports	2004
Order No. 647	Notice Format and Technical Corrections	2004
Order No. 649	Critical Energy Infrastructure Information	2004
Order No. 651	Delegations of Authority	2004
Order No. 652	Reporting Requirement for Changes in Status For Public Utilities With Market-Based Rate Authority	2005
Order No. 657	Electronic Filing of the Application for Authorization for the Issuance of Securities or the Assumption of Liabilities	2005
Order No. 658	Modification of Nuclear Plant Decommissioning Trust Fund Guidelines	2005
Order No. 659	Electronic Reporting of Shortages and Anticipated Shortages of Electric Energy and Capacity	2005
Order No. 660	Delegation of Authority to the Director of the Office of Markets, Tariff and Rates, and to the Director of External Affairs	2005
Order No. 661	Interconnection for Wind Energy	2005
Order No. 662	Critical Energy Infrastructure Information	2005
Order No. 663	Revision of Rules of Practice and Procedure Regarding Issue Identification	2005
Order No. 664	Commission Authorization to Hold Interlocking Positions	2005
Order No. 667	Repeal of the Public Utility Holding Company Act of 1935 and Enactment of the Public Utility Holding Company Act of 2005	2005
Order No. 668	Accounting and Financial Reporting for Public Utilities Including RTOs	2005
Order No. 669	Transactions Subject to FPA Section 203	2005
Order No. 2006	Standardization of Small Generator Interconnection Agreements and Procedures	2005
Order No. 670	Prohibition of Energy Market Manipulation	2006
Order No. 671	Revised Regulations Governing Small Power Production and Cogeneration Facilities	2006
Order No. 672	Rules Concerning Certification of the Electric Reliability Organization, and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards	2006
Order No. 674	Conditions for Public Utility Market-Based Rate Authorization Holders	2006
Order No. 675	Procedures for Disposition of Contested Audit Matters	2006
Order No. 676	Standards for Business Practices and Communication Protocols for Public Utilities	2006
Order No. 677	Revisions to Record Retention Requirements for Unbundled Sales Service, Persons Holding Blanket Marketing Certificates, and Public Utility Market-Based Rate Authorization Holders	2006
Order No. 679	Promoting Transmission Investment through Pricing Reform	2006
Order No. 680	Commission Procedures During Periods of Emergency Requiring Activation of Continuity of Operations Plan	2006
Order No. 681	Long-Term Firm Transmission Rights in Organized Electricity Markets	2006
Order No. 683	Critical Energy Infrastructure Information	2006
Order No. 684	Financial Accounting, Reporting and Records Retention Requirements Under the Public Utility Holding Company Act of 2005	2006
Order No. 685	Electronic Filing of FERC Form No. 60	2006
Order No. 688	New PURPA Section 210(m) Regulations Applicable to Small Power Production and Cogeneration Facilities	2006
Order No. 689	Regulations for Filing Applications for Permits to Site Interstate Electric Transmission Facilities	2006

Sources: Federal Energy Regulatory Commission. (2014). *eLibrary*. Retrieved from <http://www.ferc.gov/docs-filing/elibrary.asp>;
Lexis Nexis Academic at: <http://www.lexisnexis.com/ezproxy.lib.vt.edu:8080/hottopics/inacademic/>;
Westlaw at: http://web2.westlaw.com/ezproxy.lib.vt.edu:8080/signon/default.w?vr=2.0&fn=_top&rs=WLW13.10&hcap=1.

Table 20. FERC Orders by Subject, 1977 - 1986, 1990 - 1994, & 2000 - 2006

Administrative Orders		
Order No.	Title	Year
Order No. 1	Providing for the continuation of functions vested in, or delegated to, the Federal Energy Regulatory Commission	1977
Order No. 4	Exemption of certain emergency gas transportation arrangements during the coal emergency	1978
Order No. 8	Establishment of rules relating to investigations	1978
Order No. 32	Procedure for submission of settlement agreements	1979
Order No. 47	Rate of interest on amounts held subject to refund	1979
Order No. 77	Briefs on exceptions and briefs opposing exceptions-standard format and summary	1980
Order No. 182	Application for authorization issuance of securities or the assumption of liabilities	1981
Order No. 225	Revision of rules of practice and procedure to expedite trial-type hearings	1982
Order No. 258	Revisions to the uniform system of accounts	1982
Order No. 353	Exemption from and revisions to procedures collection of information concerning cost of providing retail electric service	1983
Order No. 335	Revisions to regulations on retention of records by public utilities	1983
Order No. 375	Rules of practice and procedure. Reconsideration of initial decision	1984
CWIP and Fuel Adjustment Clause Orders		
Order No.	Title	Year
Order No. 298	Construction work in progress for public utilities	1983
Order No. 352	Treatment of purchased power in the fuel cost adjustment clause for electric utilities	1983
Order No. 448	Construction work in progress -- anticompetitive implications	1986
Delegation Orders		
Order No.	Title	Year
Order No. 38	Delegation of the Commission's authority to various staff and Office Directors	1979
Order No. 147	Delegation of the Commission's authority to the Office Directors	1981
Order No. 224	Delegation of authority	1982
Order No. 388	Delegation to Office Directors	1984
Fees and Charges Orders		
Order No.	Title	Year
Order No. 379	Annual charges for use of government dams and other structures under Part I of the Federal Power Act	1984
Order No. 395	Fees applicable to general activities	1984
Order No. 435	Fees applicable to electric utilities, cogenerators, and small power producers	1985
Generic Rate of Return Orders		
Order No.	Title	Year
Order No. 389	Generic determination of rate of return on common equity for electric utilities	1984
Order No. 420	Generic determination on rate of return on common equity for public utilities	1985
Order No. 442	Generic determination of rate of return on common equity for public utilities	1985
Order No. 461	Generic determination of rate of return on common equity for public utilities	1986
Interlocking Directorate Orders		
Order No.	Title	Year
Order No. 67	Public utility filing requirement under section 211 of PURPA of 1978	1980
Order No. 75	Filing requirements interlocking positions under Section 211 of PURPA of 1978	1980
Order No. 140	Public utility filing requirement; Format no. FERC 561, annual report of interlocking positions	1981
Order No. 374	Application to hold interlocking positions requiring approval under Section 305(b) of the Federal Power Act	1984
Order No. 446	Automatic authorization for holding positions that require Commission approval under Section 305 (B) FPA	1986
Orders on Form Revisions		
Order No.	Title	Year
Order No. 5	Amendments to uniform systems of accounts for public utilities and licensees Forms 1, 1-F, 2, 2-A, and 9	1978
Order No. 22	Order denying limitation on the distribution of information collected on form 423 and terminating proposed rulemaking	1979
Order No. 61	Electric utility reporting on measures to implement conservation of natural resources	1979
Order No. 201	Final rule to discontinue monthly power plant report; Form No. 4	1982
Order No. 264	Final rule to amend monthly report of cost and quality of fuels for electricity plants; Form No. 423	1982
Order No. 265	Discontinuance of Form No. 5, electric utility company monthly report	1982
Order No. 282	Revision of form no. 12, power system statement	1983
Order No. 418	Amendments FERC Form No. 1, require filing of Form No. EIA-714, and elimination of rule for FERC Form No. 12	1985
Order No. 419	Deletion of a 1987 filing requirement for FERC Form No. 80	1985
Order No. 458	Form EIA-767, operation and design report and FERC Form No. 549-ST transportation reports	1986
Power Plant Industrial Fuel Act Orders		
Order No.	Title	Year
Order No. 37	Determination of power plant design capacity	1979
PURPA Implementation Orders		
Order No.	Title	Year
Order No. 39	Amendments to the notice requirements of the Federal Power Act	1979
Order No. 46	Collection of cost of service information under section 133 of PURPA of 1978	1979
Order No. 69	Final rule implementing Section 210 of PURPA of 1978: Small power production and cogeneration facilities rates	1980
Order No. 70	Final rule requirements and procedures for qualifying facility status designation	1980
Order No. 76	Final rule Section 213 of PURPA of 1978: Exempts small conduit hydroelectric facilities from Part I of FPA	1980

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Order No. 104	Section 206(d) exemption mechanical cogeneration facilities from incremental pricing provisions of NGPA of 1978	1980
Order No. 106	Exempts small hydro projects from all or part of Part I of the Federal Power Act	1980
Order No. 135	Small power production and cogeneration facilities eligibility, rates and exemptions geothermal small power production	1981
Order No. 183	Regulations governing applications for license for minor water power projects 5 megawatts or less	1981
Order No. 200	Revise FERC form no. 1, annual report of electric utilities, licensees and others (class A and class B)	1982
Order No. 202	Requirements of part I of the Federal Power Act small hydroelectric power projects 5 megawatts or less	1982
Order No. 231	Extension of filing date under Section 133 of PURPA	1982
Order No. 255	Amendments to regulations governing case-by-case exemption of small hydroelectric projects from FPA	1982
Order No. 281	Extension of filing deadline date under Section 133 of PURPA	1983
Order No. 401	Shortages of electric energy and capacity under Section 206 of the PURPA of 1978	1984

Transmission Related Orders

Order No.	Title	Year
Order No. 84	Filing of rate schedules; regulations limiting percentage adders in electric rates for transmission services	1980

Wholesale Rate Orders

Order No.	Title	Year
Order No. 91	Revised requirements filing changes electric rate schedules and submission of supporting data	1980
Order No. 144	Tax normalization reflecting timing differences for ratemaking and income tax purposes	1981
Order No. 303	Interpretation of authority to suspend initial rate schedules	1983

Administrative Orders

Order No.	Title	Year
Order No. 518	Deletion of procedural regulations for transmission electricity to a foreign country and for emergency connection of facilities	1990
Order No. 530	Streamlining commission procedures for review of staff action	1990
Order No. 541	Eliminating unnecessary regulation: Final rule and policy statement	1992
Order No. 545	Streamlining electric power regulation	1992
Order No. 549	Repeal of certain standards of conduct provisions in part 3c	1993
Order No. 552	Revisions to uniform systems of accounts for allowances under the Clean Air Act Amendments of 1990 and assets and liabilities and to Form Nos. 1, 1-F, 2 and 2-A	1993
Order No. 568	Filing requirements for public utility and interstate natural gas company rate schedules and tariffs	1994

Delegation Orders

Order No.	Title	Year
Order No. 564	Electronic filing of FERC Form No. 1 and delegation to Chief Accountant	1993
Order No. 570	Authorizing delegation to the Secretary in proceedings under Section 210 or Section 211 of the Federal Power Act	1994
Order No. 574	Electronic filing of FERC Form No. 1 and delegation to Chief Accountant	1994

Energy Policy Act Orders

Order No.	Title	Year
Order No. 550	Filing requirements and ministerial procedures for persons seeking exempt wholesale generator status	1993
Order No. 569	Interpretation and amendment clarifying exemption to qualifying facilities from the Federal Power Act	1994

Fees and Charges Orders

Order No.	Title	Year
Order No. 521	Revision of formula for determining filing fees; Interim rule	1990
Order No. 527	Revision of rate schedule filings under sections 205 and 206 of the Federal Power Act	1990

Generic Rate of Return Orders

Order No.	Title	Year
Order No. 532	Generic determination of rate of return on common equity for public utilities	1990
Order No. 538	Generic determination of rate of return on common equity for public utilities	1992

Orders on Form Revisions

Order No.	Title	Year
Order No. 529	Amendments to FERC Form Nos. 1 and 1-F, and annual charges, and fuel cost and purchased economic power adjustment clauses	1990
Order No. 531	Modification of regulations on Form No. EIA-714, annual electric power system report	1990
Order No. 534	Rescission of regulations pertaining to utility requirement to report on Form No. EIA-767	1991
Order No. 535	Change of name of Form No. EIA-714, Annual electric control and planning area report	1991
Order No. 558	Reporting under section 213(b) of the Federal Power Act and under the Energy Policy Act of 1992, and conforming and other changes to Form No. FERC-714	1993

Transmission Related Orders

Order No.	Title	Year
Order No. 560	Provisions for applications for transmission services under section 211 of the Federal Power Act	1993

Accounting and Financial Reporting Orders

Order No.	Title	Year
Order No. 618	Depreciation Accounting	2000
Order No. 627	Accounting and Reporting of Financial Instruments, Comprehensive Income, Derivatives and Hedging Activities	2002
Order No. 631	Accounting, Financial Reporting, and Rate Filing Requirements for Asset Retirement Obligations	2003
Order No. 646	Quarterly Financial Reporting and Revisions to the Annual Reports	2004

Table 20 Continues on to the Next Page

Order No. 668	Accounting and Financial Reporting for Public Utilities Including RTOs	2005
Order No. 673	Procedures for Disposition of Contested Audit Matters	2006
Order No. 684	Financial Accounting, Reporting and Records Retention Requirements Under the Public Utility Holding Company Act of 2005	2006

Administrative Orders:

Order No.	Title	Year
Order No. 614	Designation of Electric Rate Schedule Sheets	2000
Order No. 617	Preservation of Records of Public Utilities, Licensees, Natural Gas Companies, & Oil Pipeline Cos.	2000
Order No. 619	Electronic Filing of Documents	2000
Order No. 623	Amendment to Rules Governing Off-the-Record Communications	2001
Order No. 634	New Reporting Requirements for Utilities in Cash Management Programs	2003
Order No. 2003	Standardization of Generator Interconnection Agreements and Procedures	2003
Order No. 647	Notice Format and Technical Corrections	2004
Order No. 652	Reporting Requirement for Changes in Status For Public Utilities With Market-Based Rate Authority	2005
Order No. 657	Electronic Filing of the Application for Authorization for the Issuance of Securities or the Assumption of Liabilities	2005
Order No. 658	Modification of Nuclear Plant Decommissioning Trust Fund Guidelines	2005
Order No. 659	Electronic Reporting of Shortages and Anticipated Shortages of Electric Energy and Capacity	2005
Order No. 663	Revision of Rules of Practice and Procedure Regarding Issue Identification	2005
Order No. 674	Conditions for Public Utility Market-Based Rate Authorization Holders	2006
Order No. 677	Revisions to Record Retention Requirements for Unbundled Sales Service, Persons Holding Blanket Marketing Certificates, and Public Utility Market-Based Rate Authorization Holders	2006
Order No. 680	Commission Procedures During Periods of Emergency Requiring Activation of Continuity of Operations Plan	2006

Critical Energy Information Orders:

Order No.	Title	Year
Order No. 630	Critical Energy Infrastructure Information	2003
Order No. 643	Amendments to Conform Regulations With Order No. 630 (Critical Energy Infrastructure Information Final Rule)	2003
Order No. 649	Critical Energy Infrastructure Information	2004
Order No. 662	Critical Energy Infrastructure Information	2005
Order No. 683	Critical Energy Infrastructure Information	2006

Delegation Orders:

Order No.	Title	Year
Order No. 629	Amendment to Delegations of Authority to the Chief Administrative Law Judge	2003
Order No. 632	Delegations of Authority	2003
Order No. 651	Delegations of Authority	2004
Order No. 660	Delegation of Authority to the Director of the Office of Markets, Tariff and Rates, and to the Director of External Affairs	2005

EPAct of 1992 Orders:

Order No.	Title	Year
Order No. 638	Open Access Same-Time Information System and Standards of Conduct	2000
Order No. 2000-A	Regional Transmission Organizations	2000
Order No. 661	Interconnection for Wind Energy	2005
Order No. 2006	Standardization of Small Generator Interconnection Agreements and Procedures	2005
Order No. 676	Standards for Business Practices and Communication Protocols for Public Utilities	2006

EPAct of 2005 Orders:

Order No.	Title	Year
Order No. 667	Repeal of the Public Utility Holding Company Act of 1935 and Enactment of the Public Utility Holding Company Act of 2005	2005
Order No. 669	Transactions Subject to FPA Section 203	2005
Order No. 670	Prohibition of Energy Market Manipulation	2006
Order No. 671	Revised Regulations Governing Small Power Production and Cogeneration Facilities	2006
Order No. 672	Rules Concerning Certification of the Electric Reliability Organization, and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards	2006
Order No. 679	Promoting Transmission Investment through Pricing Reform	2006
Order No. 681	Long-Term Firm Transmission Rights in Organized Electricity Markets	2006
Order No. 688	New PURPA Section 210(m) Regulations Applicable to Small Power Production and Cogeneration Facilities	2006
Order No. 689	Regulations for Filing Applications for Permits to Site Interstate Electric Transmission Facilities	2006

Fees and Charges Orders:

Order No.	Title	Year
Order No. 641	Revision of Annual Charges Assessed to Public Utilities	2000

Interlocking Directorate Orders:

Order No.	Title	Year
Order No. 664	Commission Authorization to Hold Interlocking Positions	2005

Orders on Form Revisions:

Order No.	Title	Year
Order No. 642	Revised Filing Requirements Under Part 33 of the Commission's Regulations	2000
Order No. 622	Electronic Filing of FERC Form No. 423	2001
Order No. 626	Electronic Filing of FERC Form 1, and Elimination of Certain Designated Schedules in FERC Form Nos. 1 and 1-F	2002
Order No. 891	Electronic Registration	2002
Order No. 2001	Revised Public Utility Filing Requirements	2002
Order No. 685	Electronic Filing of FERC Form No. 60	2006

Table 20 Continues on to the Next Page

Transmission Related Orders		
Order No.	Title	Year
Order No. 2004	Standards of Conduct for Transmission Providers	2003

Sources: Federal Energy Regulatory Commission. (2014). *eLibrary*. Retrieved from : <http://www.ferc.gov/docs-filing/eLibrary.asp>;
 Lexis Nexis Academic at: <http://www.lexisnexis.com/eproxy/lib.vt.edu:8080/hottopic/inacademic/>;
 Westlaw at: http://web2.westlaw.com/eproxy/lib.vt.edu:8080/signon/default.w?vr=2.0&fpa_top&rv=WLW13.10&bbcp=1.

Table 21. FERC Opinions Related to Private Electric Utilities, 1977 - 1986, 1990 - 1994, & 2000 - 2006

Opinion No.	Title	Year
Opinion No. 12	Minnesota Power And Light Company	1978
Opinion No. 13	Idaho Power Company	1978
Opinion No. 15	The Electric And Water Plant Board Of The City of Frankfort, Kentucky v. Kentucky Utilities Company	1978
Opinion No. 19	Carolina Power & Light Company	1978
Opinion No. 20	Minnesota Power and Light Company	1978
Opinion No. 27	Indiana & Michigan Power Company	1978
Opinion No. 28	Southwestern Electric Power Company	1978
Opinion No. 31	Missouri Power & Light Company	1978
Opinion No. 34	Pennsylvania Power & Light Company	1979
Opinion No. 37	Public Service Company of New Hampshire	1979
Opinion No. 44	Public Service Company of Indiana, Inc.	1979
Opinion No. 49	New England Power Company	1979
Opinion No. 50	American Electric Power Service Corporation	1979
Opinion No. 53	Boston Edison Company	1979
Opinion No. 54	Alabama Power Company	1979
Opinion No. 55	Southern California Edison Company	1979
Opinion No. 57	Florida Power & Light Company	1979
Opinion No. 63	Commonwealth Edison Company	1979
Opinion No. 73	Public Service Company of New Mexico	1980
Opinion No. 75	Central Illinois Public Service Company	1980
Opinion No. 76	Central Illinois Public Service Company	1980
Opinion No. 79	Indiana & Michigan Electric Company	1980
Opinion No. 80	Kansas Gas and Electric Company	1980
Opinion No. 81	Central Illinois Light Company	1980
Opinion No. 82	Missouri Utilities Company	1980
Opinion No. 84	The Cleveland Electric Illuminating Company	1980
Opinion No. 85	El Paso Electric Company	1980
Opinion No. 86	Minnesota Power & Light Company	1980
Opinion No. 87	Minnesota Power & Light Company	1980
Opinion No. 89	Pennsylvania Power Company	1980
Opinion No. 93	Otter Tail Power Company	1980
Opinion No. 94	Union Electric Company	1980
Opinion No. 95	Indiana & Michigan Electric Company	1980
Opinion No. 97	General Public Utilities Corporation	1980
Opinion No. 102	Connecticut Yankee Atomic Power Company	1980
Opinion No. 103	The Connecticut Light and Power Company	1980
Opinion No. 104	Louisiana Power & Light Company	1980
Opinion No. 109	El Paso Electric Company	1981
Opinion No. 110	Louisiana Power & Light Company	1981
Opinion No. 112	Minnesota Power & Light Company	1981
Opinion No. 113	Utah Power and Light Company	1981
Opinion No. 114	The Connecticut Light and Power Company	1981
Opinion No. 116	Kentucky Utilities Company	1981
Opinion No. 118	Virginia Electric and Power Company	1981
Opinion No. 124	Middle South Services, Inc.	1981
Opinion No. 128	Southern California Edison Company	1981
Opinion No. 132	Carolina Power & Light Company, North Carolina Electric Membership Corporation	1981
Opinion No. 133	Public Service Company of New Mexico	1981
Opinion No. 134	Northern States Power Company	1981
Opinion No. 137	Arizona Public Service Company	1982
Opinion No. 139	Town of Highlands, North Carolina, et al. v. Nantahala Power	1982
Opinion No. 141	Wisconsin Power & Light Company	1982
Opinion No. 142	Central Illinois Public Service Company	1982
Opinion No. 143	Pacific Gas and Electric Company	1982
Opinion No. 145	Southern California Edison Company	1982
Opinion No. 146	Public Service Company of New Mexico	1982
Opinion No. 147	Pacific Gas and Electric Company	1982
Opinion No. 152	Florida Power & Light Company	1982
Opinion No. 155	Minnesota Power & Light Company	1982
Opinion No. 156	Boston Edison Company	1982
Opinion No. 157	Pennsylvania Power Company	1982
Opinion No. 158	New England Power Company	1983
Opinion No. 161	Public Service Company of New Hampshire	1983
Opinion No. 162	Southwestern Public Service Company	1983
Opinion No. 163	Potomac Edison Company	1983
Opinion No. 164	Public Service Company of New Mexico	1983
Opinion No. 165	Commonwealth Edison Company	1983
Opinion No. 169	Kentucky Utilities Company	1983
Opinion No. 170	Ohio Edison Company, Ohio Power Company	1983
Opinion No. 172	The Cleveland Electric Illuminating Company	1983
Opinion No. 175	Pacific Power & Light Company	1983
Opinion No. 176	Pennsylvania Power and Light Company	1983

Table 21 Continues on to the Next Page

Opinion No. 177	Arizona Public Service Company	1983
Opinion No. 184	Kentucky Utilities Company	1983
Opinion No. 185	Delmarva Power and Light Company	1983
Opinion No. 186	Wisconsin Electric Power Company	1983
Opinion No. 188	Kansas Gas and Electric Company	1983
Opinion No. 189	Delmarva Power and Light Company	1983
Opinion No. 193	Arizona Public Service Company	1983
Opinion No. 194	Wisconsin Public Service Corporation	1983
Opinion No. 198	Southeastern Power Administration v. Kentucky Utilities Company	1983
Opinion No. 203	Public Service Company of New Mexico, et al.	1983
Opinion No. 205	Union Electric Company and Missouri Edison Company	1984
Opinion No. 207	Alabama Power Company	1984
Opinion No. 211	Pennsylvania Power Company	1984
Opinion No. 219	Arizona Public Service Company	1984
Opinion No. 220	Utah Power & Light Company	1984
Opinion No. 231	New England Power Company	1985
Opinion No. 234	Middle South Energy, Inc.	1985
Opinion No. 242	The Cleveland Electric Illuminating Company	1985
Opinion No. 246	State of Arkansas v. Middle South Utilities, Inc.	1985
Opinion No. 251	Pacific Gas and Electric Company	1986
Opinion No. 253	Kansas Power and Light Company	1986
Opinion No. 254	New York State Electric and Gas Corporation	1986
Opinion No. 255	Town of Highlands, N.C. v. Nantahala Power	1986
Opinion No. 257	Holyoke Water Power Company	1986
Opinion No. 259	American Municipal Power - Ohio, Inc. and City of St. Mary's, Ohio v. Dayton Power and Light Company	1986

Opinion No.	Title	Year
Opinion No. 341	Southern California Edison Company	1990
Opinion No. 342	New England Power Pool	1990
Opinion No. 345	Northern States Power Company (Wisconsin)	1990
Opinion No. 346	Boston Edison Company	1990
Opinion No. 347	Southern California Edison Company, (Price Squeeze Phase)	1990
Opinion No. 349	Opinion and order establishing just and reasonable rates	1990
Opinion No. 350	Boston Edison Company	1990
Opinion No. 352	New England Power Company	1990
Opinion No. 356	Pacific Gas and Electric Company	1990
Opinion No. 359-A	Southern California Edison Company	1991
Opinion No. 361	Southern California Edison Company	1991
Opinion No. 362	Southern California Edison Company	1991
Opinion No. 366	Louisiana Power & Light Company	1991
Opinion No. 363-B	Blue Ridge Power Agency, Central Virginia Electric Cooperative, and Craig-Botetourt Electric Cooperative v. Appalachian Power Company	1992
Opinion No. 364-A	Northeast Utilities Service Company	1992
Opinion No. 370-A	Boston Edison Company	1992
Opinion No. 371	Metropolitan Edison Company	1992
Opinion No. 372	Cajun Electric Power Cooperative, Inc. v. Gulf States Utilities Company	1992
Opinion No. 373	Indiana & Michigan Municipal Distributors Association and City of Auburn, Indiana v. Indiana Michigan Power Company	1992
Opinion No. 374	Canal Electric Company, Montaup Electric Company, Eastern Edison Company, Blackstone Valley Electric Company	1992
Opinion No. 376	Boston Edison Company	1992
Opinion No. 377	Southern Company Services, Inc.	1992
Opinion No. 379	New England Power Company	1992
Opinion No. 380	Kentucky Utilities Company	1993
Opinion No. 382-A	Indiana and Michigan Distributors Association and City of Auburn, Indiana v. Indiana Michigan Power Company	1993
Opinion No. 383	Northern States Power Company (Minnesota and Wisconsin)	1993
Opinion No. 385	Entergy Services, Inc. and Gulf States Utilities Company	1993
Opinion No. 386	City of New Orleans, Louisiana v. Entergy Corporation	1993
Opinion No. 387	City of Bedford, Virginia; City of Danville, Virginia; City of Martinsville, Virginia; Town of Richlands, Virginia and Blue Ridge Power Agency	1994
Opinion No. 388	Cajun Electric Power Cooperative, Inc. v. Gulf States Utilities Company	1994
Opinion No. 389	Pacific Gas and Electric Company; Southern California Edison Company; San Diego Gas & Electric Company	1994
Opinion No. 390	Yankee Atomic Electric Company	1994

Opinion No.	Title	Year
Opinion No. 442	American Electric Power Company, Central and South West Corporation	2000
Opinion No. 443	City of Freeport, New York v. Consolidated Edison Company of New York	2000
Opinion No. 444	San Diego Gas & Electric Company v. Public Service Company of New Mexico	2000
Opinion No. 445	Southern California Edison Company	2000
Opinion No. 446	System Energy Resources, Inc.	2000
Opinion No. 447	New York State Electric & Gas Corporation	2000
Opinion No. 448	Niagara Mohawk Power Corporation	2000
Opinion No. 449	Connecticut Yankee Atomic Power Company	2000
Opinion No. 451	Rock County Electric Cooperative v. Wisconsin Power & Light Company	2001
Opinion No. 452	City of Alma, Michigan	2001
Opinion No. 453	Midwest Independent Transmission System Operator	2001
Opinion No. 454	North Attleborough Electric Department v. New England Power Company	2001
Opinion No. 455	Wisconsin Electric Power Company	2002
Opinion No. 456	Consumers Energy Company	2002
Opinion No. 457	Central Hudson Gas & Electric Corporation	2002

Table 21 Continues on to the Next Page

Opinion No. 458	Pacific Gas and Electric Company	2002
Opinion No. 459	Pacific Gas and Electric Company	2002
Opinion No. 460	Arizona Public Service Company v. Idaho Power Company	2002
Opinion No. 461	Village of Jackson Center, Ohio v. Dayton Power & Light Company	2002
Opinion No. 462	Northern Indiana Public Service Company, Inc.	2002
Opinion No. 463	California Independent System Operator Corporation - Pacific Gas and Electric Company	2003
Opinion No. 464	California Independent System Operator Corporation	2003
Opinion No. 465	Sierra Pacific Power Company	2003
Opinion No. 466	Pacific Gas and Electric Company	2003
Opinion No. 467	Suffolk County Electrical Agency	2004
Opinion No. 468	Louisiana Public Service Commission v. Entergy Corporation	2004
Opinion No. 469	Allegheny Power	2004
Opinion No. 470	Pacific Gas & Electric Company	2004
Opinion No. 471	Northern California Power Agency v. Pacific Gas and Electric Company	2004
Opinion No. 472	New PJM Companies	2004
Opinion No. 473	Ameren Energy Generating Company	2004
Opinion No. 474	Northeast Texas Electric Cooperative	2004
Opinion No. 475	East Texas Electric Cooperative, Inc. v. Central and South West Services	2004
Opinion No. 476	Consolidated Edison Company of New York v. Public Service Electric and Gas Company	2004
Opinion No. 477	Pacific Gas and Electric Company	2004
Opinion No. 478	California Independent System Operator	2004
Opinion No. 479	City of Vernon, California v. California Independent System Operator	2005
Opinion No. 480	Louisiana Public Service Commission v. Entergy Corporation	2005
Opinion No. 482	Pacific Gas and Electric Company	2005
Opinion No. 483	City of Anaheim, California	2005
Opinion No. 485	Entergy Services, Inc. and Entergy Power	2006
Opinion No. 487	Southern California Edison Company	2006
Opinion No. 488	Arkansas Electric Cooperative Corporation v. Entergy Arkansas	2006
Opinion No. 489	Bangor Hydro-Electric Company	2006
Opinion No. 490	Cabazon Wind Partners, LLC v. Southern California Edison Company	2006
Opinion No. 491	Old Dominion Electric Cooperative	2006
Opinion No. 492	Pacific Gas and Electric Company v. California Independent System Operator	2006

Sources: Federal Energy Regulatory Commission. (2014). *eLibrary*. Retrieved from : <http://www.ferc.gov/docs-filing/elibrary.asp>;
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Table 22. FERC Opinions by Subject, 1977 - 1986, 1990 - 1994, & 2000 - 2006

Opinion No.	Docket No.	Subjects Addressed	Year
Opinion No. 12	E-8494	wholesale rates - amortization accounts & tax considerations	1978
Opinion No. 13	ER76-409, ER76-508	wholesale rates - consider rate of return & expenses	1978
Opinion No. 15	E-7704, E-7669, E-7937, E-8055	complaint against utility for anticompetitive behavior	1978
Opinion No. 19	ER76-495	wholesale rates - reasonableness of rate of service schedule	1978
Opinion No. 20	E-9499 and E-7802, ER76-20	transmission rates - service agreement	1978
Opinion No. 27	ER76-4	wholesale rates - rate of return, automatic tariff, & nuclear power	1978
Opinion No. 28	ER76-177, ER76-207, ER76-208 and ER76-210	wholesale rates - CWIP fuel adjustment & accounting	1978
Opinion No. 31	ER76-579	wholesale rates - price squeeze and discrimination	1978
Opinion No. 34	ER76-308	wholesale rates - fuel adjustment clause calculation	1979
Opinion No. 37	ER76-285	Fuel adjustment clause - spot purchase price of coal	1979
Opinion No. 44	ER76-149 and E-9537	wholesale rates - accounting for power storage expenses	1979
Opinion No. 49	ER76-304, ER76-317, ER76-498	wholesale rates - rate of return & tax considerations	1979
Opinion No. 50	E-9408	wholesale rates - transmission interconnection & power pooling	1979
Opinion No. 53	E-8855	wholesale rates - nuclear power, transmission cost, & fuel cost	1979
Opinion No. 54	E-8851	wholesale rates - utility must recalculate cost of service	1979
Opinion No. 55	E-8570	wholesale rates - utility calculation largely approved	1979
Opinion No. 57	ER76-19 and ER76-81	wholesale tariff and service limitations	1979
Opinion No. 63	E-9002 and ER76-122	wholesale rates - fuel adjustment clause & price squeeze	1979
Opinion No. 73	ER76-137 and ER76-338	wholesale rates - adjustments to cost of service data	1980
Opinion No. 75	ER76-80	wholesale rates - price squeeze, discrimination, & flow through	1980
Opinion No. 76	ER77-89	wholesale rates - tax normalization & adjustment	1980
Opinion No. 79	ER76-716	wholesale rates - ratchet change, nuclear fuel cost, & tax rates	1980
Opinion No. 80	ER77-578	wholesale rates - discrimination, taxes, & price squeeze	1980
Opinion No. 81	ER76-819	wholesale rates - rate schedules & reasonableness	1980
Opinion No. 82	ER77-154 and ER76-14	wholesale rates - transmission roll-in & rate design	1980
Opinion No. 84	ER76-104	transmission service tariff - wheeling	1980
Opinion No. 85	ER77-488 and ER76-520	wholesale rates - CWIP (AFUDC) & rate of return	1980
Opinion No. 86	ER76-827	wholesale & transmission rates - cost calculations	1980
Opinion No. 87	ER77-427	wholesale rates - cost of service calculation	1980
Opinion No. 89	ER77-277	wholesale rates - cost of service calculation	1980
Opinion No. 93	ER77-5 and E-8152	transmission rates - wheeling service	1980
Opinion No. 94	ER77-614	wholesale rates - tax allowance, demand ratchet, & discrimination	1980
Opinion No. 95	E-9362, ER76-792 and ER76-716	wholesale rates - load capacity, billing, & service terms	1980
Opinion No. 97	E1-80-22	settlement - pricing formula & power pool	1980
Opinion No. 102	ER76-360	wholesale rates - just and reasonable & cost of service	1980
Opinion No. 103	ER76-320	wholesale rates - just and reasonable calculation	1980
Opinion No. 104	ER77-533	wholesale rates - CWIP inclusion	1980
Opinion No. 109	ER77-488 and ER76-520	wholesale rates - cost of service recalculated	1981
Opinion No. 110	ER77-533	wholesale rates - proposed rate increases	1981
Opinion No. 112	ER80-5	wholesale rates - demand ratchet clause	1981
Opinion No. 113	ER76-121	wholesale rates - fuel adjustment and ratchet	1981
Opinion No. 114	ER76-217	wholesale rates - ratchet issue	1981
Opinion No. 116	ER76-417	wholesale rates - increase excessive	1981
Opinion No. 118	ER76-822	wholesale rates - increase investigation	1981
Opinion No. 124	ER76-277	wholesale rates - disallowed and amended system agreement	1981
Opinion No. 128	E-8570	wholesale rates - price squeeze	1981
Opinion No. 132	ER77-483 and ER77-551, E-9606	wholesale rates - fuel adjustment clause & spent nuclear fuel	1981
Opinion No. 133	ER76-338	wholesale rates - proposed rates disallowed	1981
Opinion No. 134	ER76-616	cost allocation - abandoned power plant	1981
Opinion No. 137	ER76-126	wholesale rates - revised	1982
Opinion No. 139	ER76-828-000; E1.76-18-000	wholesale rates - revised	1982
Opinion No. 141	ER77-347-000	wholesale rates - spent nuclear fuel, price squeeze, & cost data	1982
Opinion No. 142	ER80-71-000	wholesale rates - intervention permitted & revised rates	1982
Opinion No. 143	ER76-532-000	wheeling rates - transmission costs	1982
Opinion No. 145	ER76-150-003	wholesale rates - AFUDC & revised costs	1982
Opinion No. 146	ER80-111-001	wholesale rates - rates effective	1982
Opinion No. 147	ER80-214-000	wholesale rates - revised rates	1982
Opinion No. 152	ER77-175-000 and ER76-18-000	transmission rates - settlement and revised rates	1982
Opinion No. 153	ER80-5-000	wholesale rates - revised tariffs, ratchet, & costs	1982
Opinion No. 156	ER80-308-000	wholesale rates - nuclear fuel disposal costs	1982
Opinion No. 157	ER77-277-002 and E1.82-24-000	wholesale rates - price squeeze and discrimination	1982
Opinion No. 158	ER81-70-000 and ER81-71-000	wholesale rates - rate of return	1983
Opinion No. 161	ER81-620-000	wholesale rates - contract rate of return & effective date	1983
Opinion No. 162	ER80-373-000	wholesale rates - costs, revenues, & rate of return	1983
Opinion No. 163	ER81-141-000	wholesale rates - revised costs	1983
Opinion No. 164	ER81-187-000	wholesale rates - uranium mining, costs, & unused tax credit	1983
Opinion No. 165	ER76-182-000 and ER80-106-000	electric service tariff - spent nuclear fuel costs & revised rates	1983
Opinion No. 168	ER76-417-000	terms and conditions of wholesale service	1983
Opinion No. 170	ER76-490-000; ER80-673-000	transmission rates - service schedule interconnection agreement	1983
Opinion No. 172	ER83-138-001	transmission service - rates, conditions, & demand ratchet	1983
Opinion No. 175	E-7796-007	termination of unused rate schedule and associated conditions	1983
Opinion No. 176	ER82-493-000 and ER82-494-000	reverser of rules for fuel adjustment clause - wholesale rates	1983
Opinion No. 177	ER81-179-006	wholesale rates - rate increase	1983
Opinion No. 184	ER81-267-000 and ER81-341-000	wholesale rates - fairness of new rates	1983
Opinion No. 185	ER76-414-000	wholesale rates - increase, price squeeze, and settlement	1983
Opinion No. 186	ER80-567-000	wholesale rates - time differentiated & marginal cost pricing	1983
Opinion No. 188	ER80-259-000	wholesale rates - rate increases & partial service contracts	1983
Opinion No. 189	ER80-363-000	wholesale rates - locked-in	1983
Opinion No. 191	ER81-179-000	renaming treatment of payment - sale harbor transaction	1983
Opinion No. 194	ER82-673-000	wholesale rates - interruptible rates & retail rates	1983
Opinion No. 198	E1.80-3-000	transmission - dispatch order to control wheeling	1983
Opinion No. 203	ER84-153-000	wholesale rates - competitive market experiment	1983
Opinion No. 205	ER81-450-000 and ER81-461	wholesale rates - tariff rate increase	1984
Opinion No. 207	ER83-368-003	wholesale rates - allocation of refunds on spent nuclear fuel costs	1984
Opinion No. 211	ER81-779-005	wholesale rates - net rate of return on common equity	1984
Opinion No. 219	ER82-481-000	wholesale rates - rate adjustment & investment tax credit	1984
Opinion No. 220	ER82-211-000	subtransmission facilities - rolled in costs	1984
Opinion No. 231	ER82-703-000	wholesale rates - reverser costs cancelled nuclear power plant	1985
Opinion No. 234	ER82-616-000, ER82-616-005, ER82-616-015, ER82-616-017, ER82-616-024, ER82-616-028, ER82-683-000, ER82-483-003, ER82-483-021, ER82-483-024	allocation of costs - nuclear power	1985
Opinion No. 242	ER83-138-000	transmission rates - partial requirements & service	1985
Opinion No. 246	ER81-428-000 and ER82-483-000	qualifying facilities - conditions for purchase from	1985
Opinion No. 251	ER84-022-000	wholesale rates - settlement agreement	1986
Opinion No. 253	ER83-418-000 and ER84-188-000	wholesale rates - rate increase & wheeling conditions	1986
Opinion No. 254	ER82-419-000	transmission rates - agreement & revisions	1986
Opinion No. 255	E1.82-204-000	wholesale rates - depreciation complaint	1986
Opinion No. 257	ER84-374-000	wholesale rates - exceptions & revisions	1986
Opinion No. 259	E1.81-144-002	wheeling contract	1986

Table 22 Continues on to the Next Page

Opinion No.	Docket No.	Subjects Addressed	Year
Opinion No. 341	ER06-116-001, E1.06-21-001, ER06-332-002, ER06-134-002, ER07-69-001 and ER07-70-001	transmission and wheeling	1990
Opinion No. 342	ER06-694-001	building generation plants	1990
Opinion No. 343	ER06-72-000	wholesale rate increase - considers depreciation and transmission	1990
Opinion No. 344	FA07-62-000	wholesale rates - considers cost of open nuclear fuel	1990
Opinion No. 347	ER76-195-000	price squeeze and fuel adjustment clause	1990
Opinion No. 349	ER09-673-000 and ER09-672-001	transmission tariff (charges)	1990
Opinion No. 350	ER06-643-001, ER07-140-001, ER07-119-001, and ER07-169-001	wholesale rates - fuel nuclear plant retirement	1990
Opinion No. 352	ER06-630-000, ER06-631-000, and ER06-18-000	wholesale rate design	1990
Opinion No. 356	ER06-40-000 and ER06-312-000	transmission rate schedule	1990
Opinion No. 358	ER02-477-000 and ER03-301-000	wholesale rate increase- fuel adjustment nuclear plant retirement	1991
Opinion No. 361	ER04-75-007	wholesale rates - considers transmission, wheeling, & generation	1991
Opinion No. 362	ER04-75-000	wholesale rate increase - considers fuel and nuclear plant retirement	1991
Opinion No. 366	E1.09-7-001 and FA06-63-001	wholesale rates and fuel clause regulations	1991
Opinion No. 363	E1.09-53-003; ER90-132-002 and ER90-133-002	wholesale rates - considers unamortized gain & tax credits	1992
Opinion No. 364	EC96-10-004, ER90-143-004, ER90-144-004, ER90-145-004 and E1.00-9-004	NARIC: Can intervene in sale of facilities & merger	1992
Opinion No. 370	ER06-562-004	transmission rates and requirements	1992
Opinion No. 371	ER06-388-000 and ER06-522-000	wholesale rates - consider gross receipts tax	1992
Opinion No. 372	E1.07-51-000 and E1.07-51-001; ER06-477-000 and ER06-477-001	transmission rates and requirements	1992
Opinion No. 373	E1.08-1-003; ER06-31-001 and ER06-32-001	wholesale rates - fuel costs	1992
Opinion No. 374	ER90-245-000; ER06-247-000	wholesale cost - cost of nuclear emergency evacuation planning	1992
Opinion No. 376	ER03-122-001 and ER07-232-001	transmission rates for subtransmission	1992
Opinion No. 377	ER06-48-000	wholesale rates - considers power pooling and transmission	1992
Opinion No. 379	ER91-565-000	wholesale rates - accounting method, nuclear fuel, & plant retirement	1992
Opinion No. 380	E1.04-15-000	Complaint against fuel adjustment clause	1993
Opinion No. 382	E1.08-1-005; ER06-31-004 and ER06-32-004	Complaint against fuel adjustment clause	1993
Opinion No. 383	ER90-349-000, ER90-406-000 and ER91-21-000	Transmission rates - Transmission Service Agreements & Tariff	1993
Opinion No. 385	EC92-21-000, ER92-306-000 and E1.94-13-000	Approval merger and system agreement	1993
Opinion No. 386	E1.90-48-000 and E1.90-48-003	Complaint for overbilling - Whether it applies to system agreement	1993
Opinion No. 387	TX93-2-000	Contract dispute electric service agreement	1994
Opinion No. 388	E1.09-44-002	Dispute over transmission service	1994
Opinion No. 389	ER92-595-000; ER92-596-000; ER92-626-000	California Oregon Transmission Project and operation rates	1994
Opinion No. 390	ER92-492-000	wholesale rates - unamortized investment & nuclear plant retirement	1994

Opinion No.	Docket No.	Subjects Addressed	Year
Opinion No. 442	EC98-40-000, ER98-2770-000, ER98-2786-000	Proposed Merger	2000
Opinion No. 443	E1.99-36-000	Complaint Transmission Service	2000
Opinion No. 444	E1.97-56-000, E1.99-21-000, E1.00-36-000	Complaint Wholesale Rates	2000
Opinion No. 445	ER97-2335-000, ER98-1261-000, ER98-1683-000	Transmission Service	2000
Opinion No. 446	ER99-1042-000	Wholesale Rates - nuclear decommissioning cost	2000
Opinion No. 447	ER97-2333-000, ER97-2333-002	Transmission Rates	2000
Opinion No. 448	CA96-194-000	Open access transmission tariff	2000
Opinion No. 449	ER97-413-000	Wholesale Rates - nuclear decommissioning cost	2000
Opinion No. 451	E1.97-02-000 and SC97-3-000	Wholesale Rate -Contract	2001
Opinion No. 452	SC97-4-000	Transmission - Stranded Costs	2001
Opinion No. 453	ER98-1438-000, ER98-1438-006, ER98-1438-007, ER01-479-000, ER01-479-001, EC98-24-000	Application Form to MISO	2001
Opinion No. 454	E1.00-75-001	Transmission Rates	2001
Opinion No. 455	E1.04-05-000; FA06-62-000	Wholesale Rates- Reclamation Costs	2002
Opinion No. 456	CA96-77-000; ER97-1502-000; ER98-1247-000	Open access transmission tariff	2002
Opinion No. 457	ER97-1523-011; CA97-470-010; ER97-4234-008; ER97-1523-018; CA97-470-018; ER97-4234-016	Transmission Service Agreements	2002
Opinion No. 458	ER97-2338-002; ER98-2331-001; ER97-2335-002; ER98-2322-000; ER97-2364-002; ER97-4235-002; ER98-497-002; ER98-2371-000	Wholesale and Transmission Tariffs California	2002
Opinion No. 459	ER06-2360-000; ER06-2360-001; ER06-2360-003	Transmission Tariff	2002
Opinion No. 460	E1.99-44-003; E1.99-44-000; E1.99-44-005	Transmission Service	2002
Opinion No. 461	E1.00-20-000	Wholesale - Contract Dispute	2002
Opinion No. 462	ER98-399-000	Transmission Tariff	2002
Opinion No. 463	ER01-313-000; ER01-313-001; ER01-424-000; ER01-424-001	ISO - grid management charge	2003
Opinion No. 464	ER98-497-000; ER98-497-002; ER98-1308-000; ER02-2297-001; ER02-2298-001	Participating Generator Agreement	2003
Opinion No. 465	ER98-29-003; E1.99-16-002; ER99-943-002	Transmission Service Agreements	2003
Opinion No. 466	ER99-2326-000; E1.99-68-000	Transmission Rates	2003
Opinion No. 467	TX06-6-001	Transmission Service Conditions	2004
Opinion No. 468	E1.00-65-000; ER00-2834-000; E1.95-13-002	System Agreement Modification	2004
Opinion No. 469	ER02-136-004	Transmission Rates	2004
Opinion No. 470	ER02-408-001; ER03-666-001	Transmission Rates - depreciation	2004
Opinion No. 471	ER01-2998-002; ER01-2998-003; ER02-358-002; ER02-358-003; E1.02-64-002; E1.02-64-003	Transmission Service Rights	2004
Opinion No. 472	ER03-262-010; ER03-262-009; ER03-262-013; EC98-40-008; ER98-2770-006; ER98-2786-009	Utility Interconnection with PJM	2004
Opinion No. 473	EC03-53-000; EC03-53-001	Hearing - sale of assets	2004
Opinion No. 474	E1.01-75-002	Transmission Rates - construction	2004
Opinion No. 475	E1.98-06-000	Transmission - interconnection credits	2004
Opinion No. 476	E1.02-25-000	Transmission Service - contract dispute	2004
Opinion No. 477	ER06-565-001; ER06-565-007	Transmission Service - coordinator costs	2004
Opinion No. 478	ER06-2019-006; ER06-2019-012; ER06-2019-013; ER03-819-002; ER01-819-006; ER03-608-000; ER03-608-004	Transmission - access charge	2004
Opinion No. 479	E1.00-105-007; ER06-2019-007	Transmission - revenue requirement & access charge	2005
Opinion No. 480	E1.01-84-001	System Agreement - allocation of cost	2005
Opinion No. 482	ER03-493-000; E1.05-15-000	Transmission Rates - retail rates	2005
Opinion No. 483	E1.03-15-000; E1.03-204-000	Transmission access & rates	2005
Opinion No. 485	ER03-583-000, ER03-583-001, ER03-583-002, ER03-583-004, ER03-681-000, ER03-681-001, ER03-681-003, ER03-682-000, ER03-682-001, ER03-682-002, ER03-681-004, ER03-744-000, ER03-744-001 and ER03-744-002	Power Purchase Agreements	2006
Opinion No. 487	ER02-2189-002; ER02-2189-003	Transmission - upgrade classification	2006
Opinion No. 488	E1.05-15-001	Wholesale Contract - billing and principles	2006
Opinion No. 489	ER04-157-004; ER04-714-001	RTD- return on equity	2006
Opinion No. 490	E1.04-137-000; E1.04-137-001	Transmission - upgrade classification	2006
Opinion No. 491	EC05-1-000; EC05-1-001	Cooperative Reorganization	2006
Opinion No. 492	ER04-833-000; E1.04-103-000	Transmission Tariff - obligation cost	2006

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Lexis Nexis Academic is at: <http://www.lexisnexis.com/erpcny/lib/vtdr/8080/efiling/eLibrary.asp>;
Westlaw at: <http://web2.westlaw.com/erpcny/lib/vtdr/8080/sign/default.w?ve=2.0&th=-top&tr=WLW13.10&hbp=1>

Table 23. Sample of FERC's Decisions by Subject 1977

Year	Docket No.	Subject - Includes Consideration of CWP Clauses in Rate Decisions	Reference
1977	ER76-654 and E-9145	Utah Power & Light Company - Initial Decision on Rates and Refunds	1 F.E.R.C. P63,016
	ER76-658	Iowa Power and Light Company - Order Approving Settlement Agreement	1 F.E.R.C. P61,039
	ER77-533	Louisiana Power & Light Company - Order Denying In Part And Granting In Part Motions For Rates	1 F.E.R.C. P61,153
	ER 78-77	Alabama Power Company - Order Accepting For Filing And Suspending Rate Schedules	1 F.E.R.C. P61,303
	ER76-1	The Kansas Power & Light Company - Order Accepting For Filing And Suspending Proposed Increased Rates	1 F.E.R.C. P61,199
	ER76-19 and ER78-81	Florida Power & Light Company - Order Accepting For Filing And Suspending Proposed Increased Rates	1 F.E.R.C. P61,515
Year	Docket No.	Subject - Automatic Fuel Adjustment Clauses	Reference
1977	E-9454	Public Service Company of New Mexico - Initial Decision on Application for Rate Increase	1 F.E.R.C. P63,020
	ER76-658	Iowa Power and Light Company - Order Approving Settlement Agreement	1 F.E.R.C. P61,039
	E-8264	Maine Public Service Company - Order Denying Stay	1 F.E.R.C. P61,101
	E-8884 and ER76-495	Carolina Power & Light Company - Order Accepting Proposed Settlement Agreement	1 F.E.R.C. P61,105
	ER77-546	Dixton Power & Light Company - Order Accepting In Part And Rejecting In Part Proposed Rate Schedules	1 F.E.R.C. P61,126
	ER77-483	Virginia Electric and Power Company - Order Approving Settlement Agreements	1 F.E.R.C. P61,176
	ER77-578	Kansas Gas and Electric Company - Order Conditionally Accepting & Suspending Proposed Increased Rates	1 F.E.R.C. P61,225
	ER76-285 (Phase II)	Public Service Company of New Hampshire - Initial Decision on Accounting Under Fuel Adjustment Clause	1 F.E.R.C. P63,039
	ER77-196	Florida Power Corporation - Order Approving Settlement Agreement And Determining Proper Filing Fee	1 F.E.R.C. P61,238
	ER76-209 and ER76-492	Metropolitan Edison Company - Order Denying Proposed Fuel Adjustment Clause Surcharge	1 F.E.R.C. P61,255
	ER76-607	Pennsylvania Electric Company - Order Denying Proposed Fuel Adjustment Clause Surcharge	1 F.E.R.C. P61,259
	ER76-530, ER76-626, ER76-717 and ER76-721	Arizona Public Service Company	1 F.E.R.C. P63,045
	ER76-813	Jersey Central Power and Light Company - Order Granting Motion For Summary Disposition	1 F.E.R.C. P61,022
	ER76-813	Jersey Central Power and Light Company - Order Denying Rehearing	1 F.E.R.C. P61,283
	ER76-588	Central Kansas Power Company, Inc. - ALJ's Initial Decision On The Lawfulness Of Proposed Rates	1 F.E.R.C. P63,049
Year	Docket No.	Subject - Rate Settlements	Reference
1977	ER77-264	Detroit Edison Company - Certification of Settlement Agreement	1 F.E.R.C. P63,012
	ER76-543	Southwestern Public Service Company - Certification of Proposed Settlement Agreement	1 F.E.R.C. P63,014
	ER77-483	Virginia Electric and Power Company - Certification of Settlement Agreements	1 F.E.R.C. P63,018
	ER76-714	Indiana & Michigan Electric Company - Order Adopting Settlement Agreement With Modifications	1 F.E.R.C. P61,038
	ER76-658	Iowa Power and Light Company - Order Approving Settlement Agreement	1 F.E.R.C. P61,039
	ER76-823	Alabama Power Company - Order Approving Settlement	1 F.E.R.C. P61,040
	ER76-659	Alabama Power Company - Order Approving Settlement	1 F.E.R.C. P61,054
	ER77-48	Maine Public Service Company - Order Approving Settlement Agreement	1 F.E.R.C. P61,055
	E-7791	South Carolina Electric and Gas Company - Order Approving Offer of Settlement	1 F.E.R.C. P61,074
	ER77-127, ER77-215, ER77-306, ER77-336 and ER77-502	Oklahoma Gas and Electric Company - Certification of Settlement Agreement	1 F.E.R.C. P63,027
	E-8884 and ER76-495	Carolina Power & Light Company - Order Accepting Proposed Settlement Agreement	1 F.E.R.C. P61,105
	ER77-422	Public Service Company of Oklahoma - Certification Of Proposed Settlement Agreement To The Commission	1 F.E.R.C. P63,030
	ER76-799 and ER76-800	Appalachian Power Company - Order Approving Settlement, Accepting Rate Schedule For Filing	1 F.E.R.C. P61,155
	ER77-483	Virginia Electric and Power Company - Order Approving Settlement Agreements	1 F.E.R.C. P61,176
	ER77-86	Southern Company Services, Inc. - Certification Of A Proposed Settlement	1 F.E.R.C. P63,040
	ER77-196	Florida Power Corporation - Order Approving Settlement Agreement And Determining Proper Filing Fee	1 F.E.R.C. P61,238
	ER77-388	Lake Superior District Power Company - Certification To The Commission Of Proposed Settlement Agreement	1 F.E.R.C. P63,044
	ER77-217	Central Maine Power Company - Certification To The Commission Of Proposed Settlement Agreement	1 F.E.R.C. P63,050
Year	Docket No.	Subject - Grid Reliability	Reference
1977	ER77-56	Iowa Southern Utilities Company - Order Authorizing The Issuance Of Promissory Notes	1 F.E.R.C. P61,071
	E-7738 and E-7784	Boston Edison Company - Opinion 809-A Reliability and Rates	1 F.E.R.C. P61,229
	ER76-530, ER76-626, ER76-717 and ER76-721	Arizona Public Service Company - Initial Decision On Application For Rate Increase	1 F.E.R.C. P63,045
	ER76-875	Nevada Power Company - Initial Decision On Electric Rate Increase	1 F.E.R.C. P63,046
	ER76-827	Minnesota Power & Light Company - Initial Decision Upon Proposed Rates	1 F.E.R.C. P63,051
Year	Docket No.	Subject - Issuance of Securities	Reference
1977	ER77-52	Central Illinois Public Service Company - Order Authorizing Sale & Issuance Short-Term Promissory Notes	1 F.E.R.C. P61,030
	ER77-59	Gulf States Utilities Company - Order Authorizing Issuance Of Common Stock	1 F.E.R.C. P61,037
	ER77-56	Iowa Southern Utilities Company - Order Authorizing The Issuance Of Promissory Notes	1 F.E.R.C. P61,071
	ER77-57	Oklahoma Gas and Electric Company - Order Authorizing Issuance of Short Term Promissory Notes	1 F.E.R.C. P61,072
	ER77-61	Iowa Electric Light & Power Company - Order Authorizing Issuance Of First Mortgage Bonds	1 F.E.R.C. P61,151
	E-8259	Long Island Lighting Company - Order Authorizing Issuance Of Short-Term Notes	1 F.E.R.C. P61,165
	ER76-81	Baltimore Gas and Electric Company - Order Authorizing Issuance Of Short-Term Unsecured Promissory Notes	1 F.E.R.C. P61,208
	ER77-58	Central Telephone & Utilities Corporation - Order Authorizing Sale & Issuance Short-Term Promissory Notes	1 F.E.R.C. P61,209
	ER76-1	Detroit Edison Company - Order Authorizing The Issuance Of Short-Term Unsecured Promissory Notes	1 F.E.R.C. P61,290
	ER76-5	Gulf States Utilities Company - Order Authorizing The Issuance Of Unsecured Short-Term Promissory Notes	1 F.E.R.C. P61,292
	ER76-9	Illaco Power Company - Order Authorizing The Issuance Of Unsecured Short-Term Promissory Notes	1 F.E.R.C. P61,316
	ER76-10	Iowa Public Service Company - Order Authorizing The Issuance Of Common Stock	1 F.E.R.C. P61,318
	ER77-54	Iowa Southern Utilities Company - Order Authorizing Issue Short-Term Promissory & Commercial Paper Notes	1 F.E.R.C. P61,041
	ER77-47	Kentucky Utilities Company - Order Authorizing The Issue Of Short-Term Promissory Notes	1 F.E.R.C. P61,100
	E-7477	Kansas City Power & Light Company - Order Authorizing Short-Term Unsecured Promissory Notes	1 F.E.R.C. P61,294
	ER77-60	Louisville Gas and Electric Company - Order Authorizing The Issue Of Short-Term Promissory Notes	1 F.E.R.C. P61,295
	ER77-62	El Paso Electric Company - Order Authorizing Quantity of Bonds	1 F.E.R.C. P61,099
	ER77-63	Pacific Power & Light Company - Order Authorizing Quantity Of Bonds	1 F.E.R.C. P61,141
Year	Docket No.	Subject - Debt Considerations	Reference
1977	ER76-654 and E-9145	Utah Power & Light Company - Initial Decision on Rates and Refunds	1 F.E.R.C. P63,016
	ER77-62	El Paso Electric Company - Order Authorizing Quantity of Bonds	1 F.E.R.C. P61,099
	ER77-63	Pacific Power & Light Company - Order Authorizing Quantity Of Bonds	1 F.E.R.C. P61,141
	E-8259	Long Island Lighting Company - Order Authorizing Issuance Of Short-Term Notes	1 F.E.R.C. P61,165
	ER76-530, ER76-626, ER76-717 and ER76-721	Arizona Public Service Company - Initial Decision On Application For Rate Increase	1 F.E.R.C. P63,045
	ER76-875	Nevada Power Company - Initial Decision On Electric Rate Increase	1 F.E.R.C. P63,046
	ER77-58	Central Telephone & Utilities Corporation - Order Authorizing Sale & Issuance Short-Term Promissory Notes	1 F.E.R.C. P61,209
	E-7477	Kansas City Power & Light Company - Order Authorizing Issue Short-Term Unsecured Promissory Notes	1 F.E.R.C. P61,294
	ER76-77	Alabama Power Company - Order Accepting For Filing And Suspending Rate Schedules	1 F.E.R.C. P61,303
	ER76-827	Minnesota Power & Light Company - Initial Decision Upon Proposed Rates	1 F.E.R.C. P63,051
Year	Docket No.	Subject - Transmission Interconnection & Wheeling	Reference
1977	ER76-854 and ER77-84	Boston Edison Company - Transmission Service Rates	1 F.E.R.C. P63,010
	ER77-528 and ER77-616	Northern States Power Company of Minnesota - Order Accepting For Filing, Suspending Proposed Charges	1 F.E.R.C. P61,013
	ER77-591	Northern States Power Company - Order Accepting For Filing And Suspending Notice Of Consolidation	1 F.E.R.C. P61,014
	E-9454	Public Service Company of New Mexico - Application For Rate Increase	1 F.E.R.C. P63,020
	ER77-13	Pennsylvania Electric Company - Supplements To Power Pooling Agreement	1 F.E.R.C. P61,018
	ER77-52	Central Illinois Public Service Company - Sale And Issuance Of Short-Term Promissory Notes	1 F.E.R.C. P61,030
	ER77-59	Gulf States Utilities Company - Issuance Of Common Stock	1 F.E.R.C. P61,037
	E-9578	Texas Power & Light Company - Investigation, Granting Intervention	1 F.E.R.C. P61,067
	ER77-56	Iowa Southern Utilities Company - Issuance Of Promissory Notes	1 F.E.R.C. P61,071
	ER77-57	Oklahoma Gas and Electric Company - Issuance of Short Term Promissory Notes	1 F.E.R.C. P61,072
	ER77-584	New England Power Company - Proposed Tariff and Service Agreements	1 F.E.R.C. P61,159
	ER76-25	Kansas City Power & Light Company - Proposed Transmission Rate Schedule	1 F.E.R.C. P61,145

Table 23 Continues on to the Next Page

ER77-665	Oklahoma Gas & Electric Company - Filing And Suspending Rate Increase	1 F.F.E.R.C. P61,194	
ER77-196	Florida Power Corporation - Agreement And Determining Proper Filing Fee	1 F.F.E.R.C. P61,238	
ER76-607	Pennsylvania Electric Company - Fuel Adjustment Clause Surcharge	1 F.F.E.R.C. P61,259	
ER76-875	Nevada Power Company - Initial Decision On Electric Rate Increase	1 F.F.E.R.C. P63,046	
ER76-77	Alabama Power Company - Filing And Suspending Rate Schedules	1 F.F.E.R.C. P61,303	
ER76-827	Minnesota Power & Light Company - Proposed Rates	1 F.F.E.R.C. P63,051	
ER76-659	Alabama Power Company - Order Approving Settlement	1 F.F.E.R.C. P61,054	
ER77-474	Wisconsin Public Service Corporation - Filing And Suspending Rate Increases	1 F.F.E.R.C. P61,121	
ER77-546	Dayton Power & Light Company - Proposed Rate Schedules	1 F.F.E.R.C. P61,126	
ER76-799 and ER76-800	Appalachian Power Company - Rate Schedule For Filing	1 F.F.E.R.C. P61,155	
ER77-422, ER76-20 and ER76-49	Public Service Company of Oklahoma - Suspending Settlement Agreements	1 F.F.E.R.C. P61,196	
ER76-44	New England Power Company - Proposed Service Agreement	1 F.F.E.R.C. P61,203	
ER76-70, ER76-71	Pennsylvania Power and Light Company - Proposed Changes In Service	1 F.F.E.R.C. P61,284	
ER76-588	Central Kansas Power Company, Inc. - Lawfulness Of Proposed Rates	1 F.F.E.R.C. P63,049	
Year	Docket No.	Subject - Wholesale Rate Increases	Reference
1977	E-9454	Public Service Company of New Mexico - Initial Decision on Application for Rate Increase	1 F.F.E.R.C. P63,020
	ER76-303, ER76-399	Wisconsin Electric Power Company - Order Denying Application For Rerearing	1 F.F.E.R.C. P61,119
	ER77-530	Ohio Edison Company - Price-Squeeze Hearing	1 F.F.E.R.C. P61,169
	ER76-875	Nevada Power Company - Initial Decision On Electric Rate Increase	1 F.F.E.R.C. P63,046
Year	Docket No.	Subject - Transmission Rates	Reference
1977	ER76-854 and ER77-84	Boston Edison Company - Initial Decision Transmission Rates	1 F.F.E.R.C. P63,010
	ER77-593, ER77-596, ER77-626, ER77-633, ER77-634, and ER76-38	Northern States Power Company of Minnesota - Accepting For Filing Certain Proposed Transmission Rates	1 F.F.E.R.C. P61,201
	ER77-196	Florida Power Corporation - Transmission Rates	1 F.F.E.R.C. P61,238
	ER76-19 and ER76-81	Florida Power & Light Company - Filing And Suspending Proposed Increased Rates	1 F.F.E.R.C. P61,315

Source: Lexis Nexis Academic search of FERC Decisions <http://www.lexisnxt.com/exproy/ah/vt.edu/0000/00topica/buacademic/>.

Transmission issues are explored to a lesser and greater extent in nearly every electricity decision. Meanwhile, transmission and wholesale rates were often mentioned together in FERC decisions to a greater or lesser extent often without a clear delineation between them.

Table 24. Number of FERC's Docketed Decisions and Percentage of Electricity Decisions by Year

Year	Total Decisions	Electricity Decisions	% Electricity
1977	340	96	0.282
1978	1488	369	0.248
1979	2080	393	0.189
1980	2318	515	0.222
1981	2861	546	0.191
1982	3402	809	0.238
1983	2649	847	0.320
1984	2427	825	0.340
1985	2655	1013	0.382
1986	2504	925	0.369

Year	Total Decisions	Electricity Decisions	% Electricity
1990	1987	479	0.241
1991	2050	414	0.202
1992	1893	475	0.251
1993	1913	485	0.254
1994	2255	571	0.253

Year	Total Decisions	Electricity Decisions	% Electricity
2000	1734	1014	0.585
2001	2081	1257	0.604
2002	1765	966	0.547
2003	1805	1056	0.585
2004	1888	1306	0.692
2005	2032	1437	0.707
2006	1821	1229	0.675

Source: Lexis Nexis Academic at:
[http://www.lexisnexis.com.ezproxy.lib.vt.edu:8080/hottopics/lnacademic/?](http://www.lexisnexis.com.ezproxy.lib.vt.edu:8080/hottopics/lnacademic/)

Table 25. Docket Prefixes by Year

Year	E	EC	EF	EL	ER	ES	ID	IR	PL	QF	RE	Mixed	EG	TX	SC	OA	NJ	RT	PA	CE	TS	PH	RR	Total
1977	13	-	-	-	64	16	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	96
1978	52	-	-	16	205	74	1	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	369
1979	49	-	2	16	227	79	5	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	393
1980	24	1	3	53	259	95	2	-	-	17	51	10	-	-	-	-	-	-	-	-	-	-	-	515
1981	15	12	10	33	285	113	2	-	-	52	7	17	-	-	-	-	-	-	-	-	-	-	-	546
1982	20	14	17	32	498	77	8	-	-	122	1	20	-	-	-	-	-	-	-	-	-	-	-	809
1983	14	24	21	51	412	79	9	-	-	226	-	11	-	-	-	-	-	-	-	-	-	-	-	847
1984	7	23	21	33	364	76	8	-	-	274	-	19	-	-	-	-	-	-	-	-	-	-	-	825
1985	3	23	17	48	260	70	7	3	-	557	11	14	-	-	-	-	-	-	-	-	-	-	-	1013
1986	2	25	10	53	242	76	15	4	1	479	4	14	-	-	-	-	-	-	-	-	-	-	-	925
1990	5	20	7	66	148	59	13	2	-	126	-	33	-	-	-	-	-	-	-	-	-	-	-	479
1991	1	21	13	53	108	72	19	2	-	70	2	53	-	-	-	-	-	-	-	-	-	-	-	414
1992	2	25	7	48	144	57	64	2	-	78	-	44	4	-	-	-	-	-	-	-	-	-	-	475
1993	3	19	8	52	172	31	24	-	-	70	-	37	66	3	-	-	-	-	-	-	-	-	-	485
1994	1	39	18	62	147	38	22	4	-	49	-	46	129	16	-	-	-	-	-	-	-	-	-	571
2000	-	136	13	86	356	53	2	1	-	11	-	86	254	1	3	10	2	-	-	-	-	-	-	1014
2001	-	128	11	131	457	51	1	-	-	13	-	90	321	9	2	14	8	21	-	-	-	-	-	1257
2002	-	100	4	159	370	51	2	-	-	7	-	73	165	14	3	6	1	9	2	-	-	-	-	966
2003	-	130	11	202	417	51	-	-	-	5	-	101	106	4	-	2	5	5	15	1	-	-	-	1055
2004	2	154	7	197	493	60	6	-	-	90	-	136	100	5	1	1	3	2	4	42	3	-	-	1306
2005	-	145	8	180	636	21	5	-	-	43	-	176	89	5	-	1	6	6	4	108	4	-	-	1437
2006	-	155	15	148	504	70	20	-	-	8	-	172	25	8	-	1	5	1	1	85	5	2	4	1229

Source: Lexis Nexis Academic at: <http://www.lexisnexis.com/epiproxy.lhb.vt.edu:8080/footer/academic/>

Table 26. Number of FERC Cases by Decision Maker and Year

Year	ALJ	Commission	Office Director	Total
1977	17	79	0	96
1978	61	274	34	369
1979	87	221	85	393
1980	100	283	132	515
1981	119	266	161	546
1982	131	383	295	809
1983	134	357	356	847
1984	137	315	373	825
1985	110	268	635	1013
1986	78	269	578	925

Year	ALJ	Commission	Office Director	Total
1990	14	269	196	479
1991	20	220	174	414
1992	23	228	224	475
1993	28	315	142	485
1994	23	385	163	571

Year	ALJ	Commission	Office Director	Total
2000	46	547	421	1014
2001	70	686	501	1257
2002	71	586	309	966
2003	148	634	273	1055
2004	168	722	416	1306
2005	176	877	384	1437
2006	187	703	339	1229

Source: Lexis Nexis Academic at:
[http://www.lexisnexis.com.ezproxy.lib.vt.edu:8080/hottopics/lnacademic/?](http://www.lexisnexis.com.ezproxy.lib.vt.edu:8080/hottopics/lnacademic/)

Table 27. Numbers of Orders, Opinions, & Decisions Relevant to Electric Utilities by Year

Year	Orders	Opinions	Decisions
1977	1	0	96
1978	3	8	369
1979	8	10	393
1980	10	19	515
1981	6	12	546
1982	10	12	809
1983	7	21	847
1984	7	5	825
1985	5	4	1013
1986	4	6	925
Total	61	97	6338

Year	Orders	Opinions	Decisions
1990	7	9	479
1991	2	4	414
1992	3	10	475
1993	6	5	485
1994	4	4	571
Total	22	32	2424

Year	Orders	Opinions	Decisions
2000	8	8	1014
2001	2	4	1257
2002	4	8	966
2003	8	4	1056
2004	4	12	1306
2005	13	4	1437
2006	15	7	1229
Total	54	47	8265

Source: Lexis Nexis Academic at:
<http://www.lexisnexis.com.ezproxy.lib.vt.edu:8080/hottopics/lnacademic/>

Table 28. Debt and Equity Ratios by Year

Year	Debt Ratio	Equity Ratio
1977	0.630	0.370
1978	0.624	0.376
1979	0.625	0.375
1980	0.623	0.377
1981	0.619	0.381
1982	0.606	0.394
1983	0.593	0.407
1984	0.586	0.414
1985	0.582	0.418
1986	0.572	0.428
1987	0.564	0.436
1988	0.567	0.433
1989	0.565	0.435
1990	0.568	0.432
1991	0.565	0.435
1992	0.561	0.439
1993	0.555	0.445
1994	0.549	0.451
1995	0.534	0.466
1996	0.523	0.477
1997	0.527	0.473
1998	0.531	0.469
1999	0.522	0.478
2000	0.530	0.470

Sources: U.S. Energy Information Administration. (1984), *Financial Statistics of Selected Electric Utilities 1982*, (DOE/EIA-0437(82)), Washington, D.C.: U.S. Government Printing Office, pp. 18-20; U.S. Energy Information Administration. (1989), *Financial Statistics of Selected Electric Utilities 1987*, (DOE/EIA-0437(87)), Washington, D.C.: U.S. Government Printing Office, p. 15; U.S. Energy Information Administration -- Office of Coal, Nuclear, Electric and Alternate Fuels. (1995), *Electric Power Annual 1994: (Operational and Financial Data)*. (DOE/EIA-0348(94)/2), p. 29; Washington, D.C.: U.S. Government Printing Office, Retrieved from <http://www.eia.gov/electricity/annual/archive/vol2/0348942.pdf>.
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Table 29. Private Utilities Net Operating Incomes by Year

Year	Net Operating Income
1977	\$10,286,063,000
1978	\$11,082,444,000
1979	\$11,845,406,000
1980	\$13,637,206,000
1981	\$16,259,482,000
1982	\$18,187,648,000
1983	\$20,471,359,000
1984	\$22,761,131,000
1985	\$24,140,746,000
1986	\$26,091,974,000
1987	\$26,991,564,000
1988	\$28,582,794,000
1989	\$29,351,256,000
1990	\$30,529,000,000
1991	\$32,089,000,000
1992	\$31,811,000,000
1993	\$31,730,000,000
1994	\$32,074,000,000
1995	\$34,646,000,000
1996	\$33,539,000,000
1997	\$32,286,000,000
1998	\$30,896,000,000
1999	\$32,623,000,000
2000	\$23,665,000,000
2001	\$32,366,000,000
2002	\$30,548,000,000
2003	\$29,094,000,000
2004	\$31,799,000,000
2005	\$28,866,000,000
2006	\$29,912,000,000

Sources: U.S. Energy Information Administration. (1984). *Financial Statistics of Selected Electric Utilities 1982*, (DOE/EIA-0437(82)), Washington, D.C.: U.S. Government Printing Office, pp. 8-9; U.S. Energy Information Administration. (1989). *Financial Statistics of Selected Electric Utilities 1987*, (DOE/EIA-0437(87)), Washington, D.C.: U.S. Government Printing Office, p. 3; U.S. Energy Information Administration (EIA) -- Office of Coal, Nuclear, Electric and Alternate Fuels. (2003). *Electric Power Annual 2001*. (DOE/EIA-0348(2001)). Washington, D.C.: U.S. Government Printing Office, p. 50. Retrieved from <http://www.eia.gov/electricity/annual/archive/03482001.pdf>.
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Table 30. Performance on Bond Ratings of Major U.S. Investor-Owned Electric Utilities by Year

Year	Number Improve	Number Decline	Percentage A- or Better
1984	46	10	62%
1985	15	12	65%
1986	25	13	67%
1987	5	24	62%
1988	14	16	61%
1989	19	23	61%
1991	12	14	61%
1992	24	9	62%
1993	7	18	63%
1994	5	13	60%
1995	9	10	63%

Sources: Bond rating information from Standard & Poor's Utility Compustat Services, Inc., in *Financial Statistics of Selected Electric Utilities, 1988*, U.S. Department of Energy, Energy Information Administration, DOE/EIA-0437(88) (p. 1060); reprinted in *Electricity: A New Regulatory Order?, 1991*, Congressional Research Service for the House Committee on Energy and Commerce, Committee Print 102-F (p. 77); Standard & Poor's Utility Compustat Services, Inc., in *Financial Statistics of Selected Electric Utilities, 1995*, U.S. Department of Energy, Energy Information Administration, DOE/EIA-0437(95) (p. 555); Standard & Poor's Utility Compustat Services, Inc., in *Financial Statistics of Selected Investor-Owned Electric Utilities, 1989*, U.S. Department of Energy, Energy Information Administration, DOE/EIA-0437(89) (p. 590).

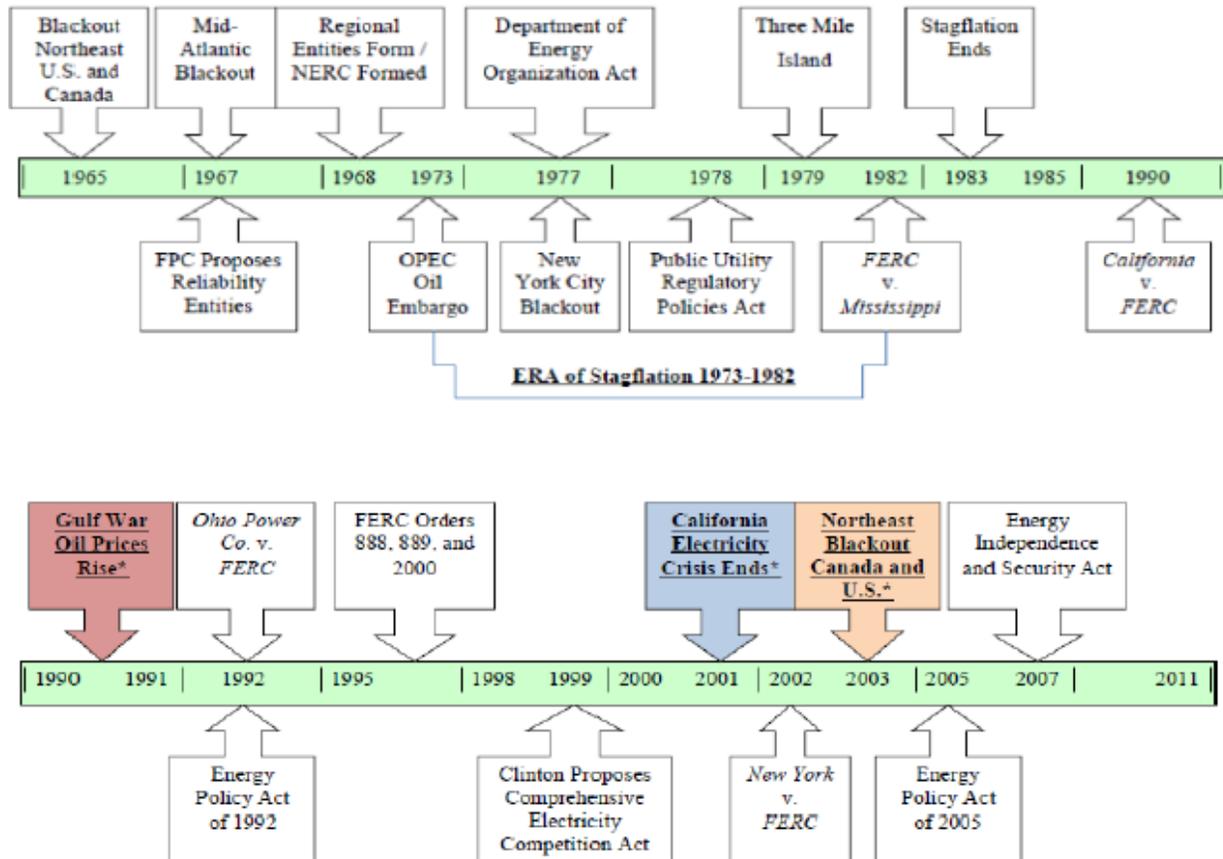
Table 31. Average Nominal Retail Price of Electricity for California, by Year*

Year	Price	% Increase
1990	8.84	
1991	9.42	6.56
1992	9.66	2.55
1993	9.69	0.31
1994	9.78	0.93
1995	9.91	1.33
1996	9.48	-4.34
1997	9.54	0.63
1998	9.03	-5.35
1999	8.75	-3.10
2000	9.47	8.23
2001	11.22	18.48
2002	12.19	8.65
2003	11.78	-3.36
2004	11.35	-3.65
2005	11.63	2.47
2006	12.82	10.23

Source: U.S. Energy Information Administration. (2013). *Average price by state by provider, back to 1990 (Form EIA-861)*. Retrieved November 18, 2013, from <http://www.eia.gov/electricity/data.cfm#sales>.

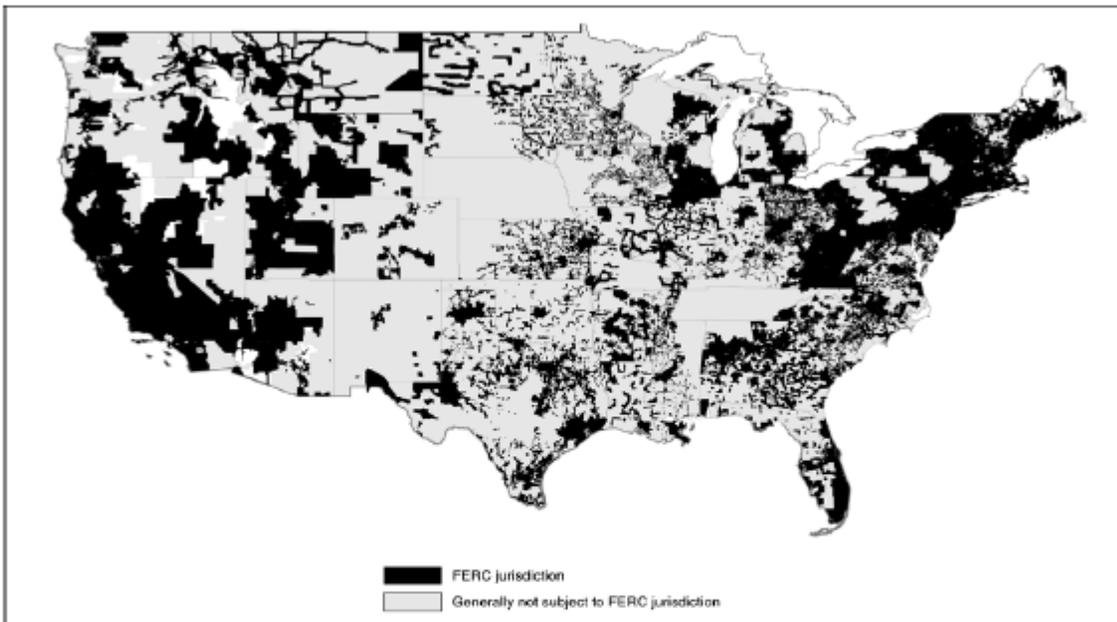
*Real rates are not available for this period.

Figure 1. Timeline of Events and Responses



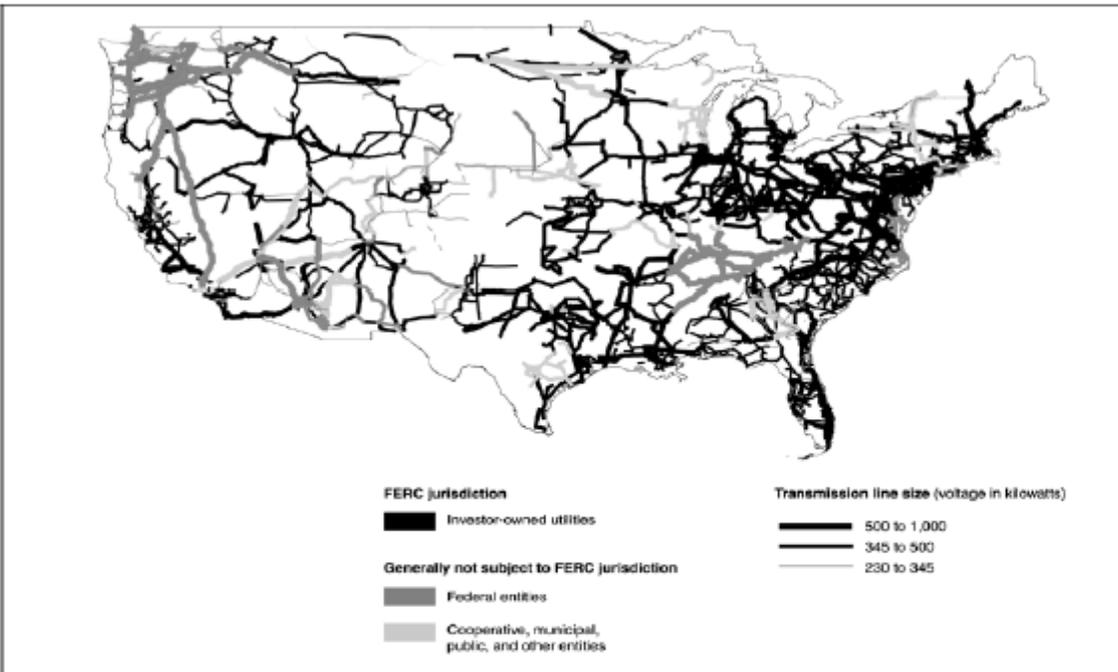
Crises are underlined in bold.

Figure 2. Areas of the United States Subject to FERC Jurisdiction



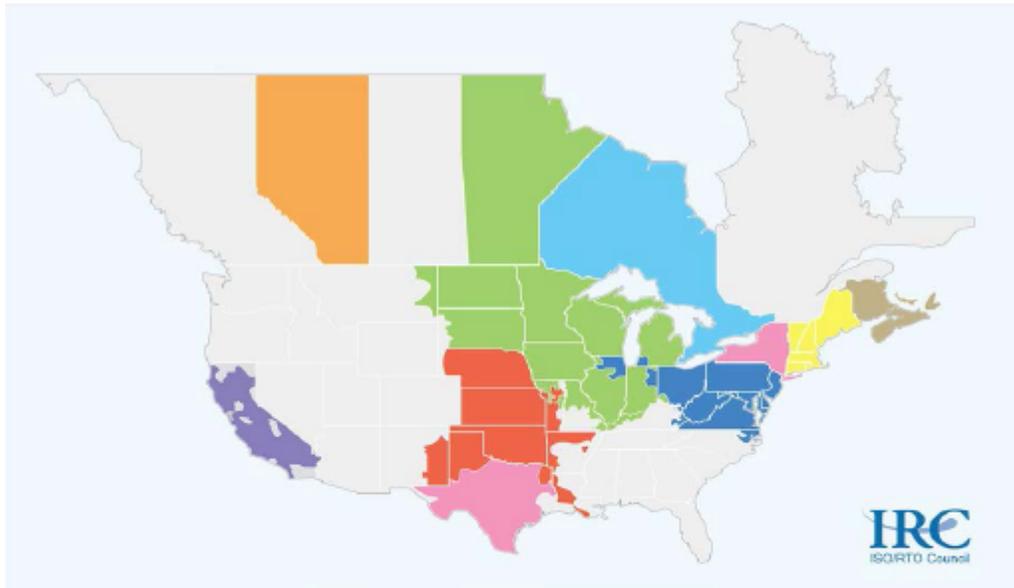
Source: U.S. General Accounting Office. (December 2002). *Lessons Learned from Electricity Restructuring: Transition to Competitive Markets Underway, but Full Benefits Will Take Time and Effort to Achieve*. (GAO-03-271). Retrieved March 13, 2012, from <http://www.gao.gov/assets/160/157320.pdf>, p. 46.
GAO analysis of PowerMap data provided by Platt's/RDI.

Figure 3. Transmission Lines in the United States Subject to FERC Jurisdiction



Source: U.S. General Accounting Office. (December 2002). *Lessons Learned from Electricity Restructuring: Transition to Competitive Markets Underway, but Full Benefits Will Take Time and Effort to Achieve*. (GAO-03-271). Retrieved March 13, 2012, from <http://www.gao.gov/assets/160/157320.pdf>, p. 47.
GAO analysis of PowerMap data provided by Platt's/RDI.

Figure 4. Regional Transmission Organizations and Independent System Operators



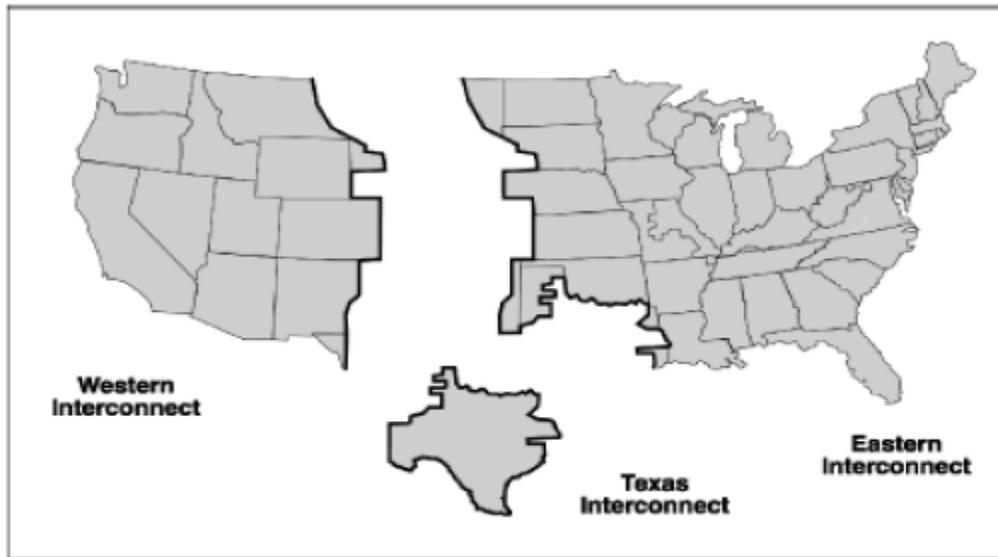
Source: ISO/RTO Council. (2012). *ISO RTO Operating Regions – Map*. Retrieved March 31, 2012, from <http://www.isorto.org/atf/cf/%7B5B4E85C6-7EAC-40A0-8DC3-003829518EBD%7D/ISO%20RTO%20Map%20-%20Labels.pdf>.

The area shaded in purple in California belongs to the California Independent System Operators (CAISO) and the area shaded in pink belongs to the Electric Reliability Council of Texas (ERCOT); both are ISOs. The area in light green belongs to MISO, the area shaded in red belongs to the Southwest Power Pool (SPP), the area shaded in dark blue belongs to the PJM Interconnection, the entire state of New York belongs to the New York Independent System Operators (NYISO), and all of New England belongs to the Independent System Operators of New England (ISO-NE); all five are RTOs.

In Gray Scale:

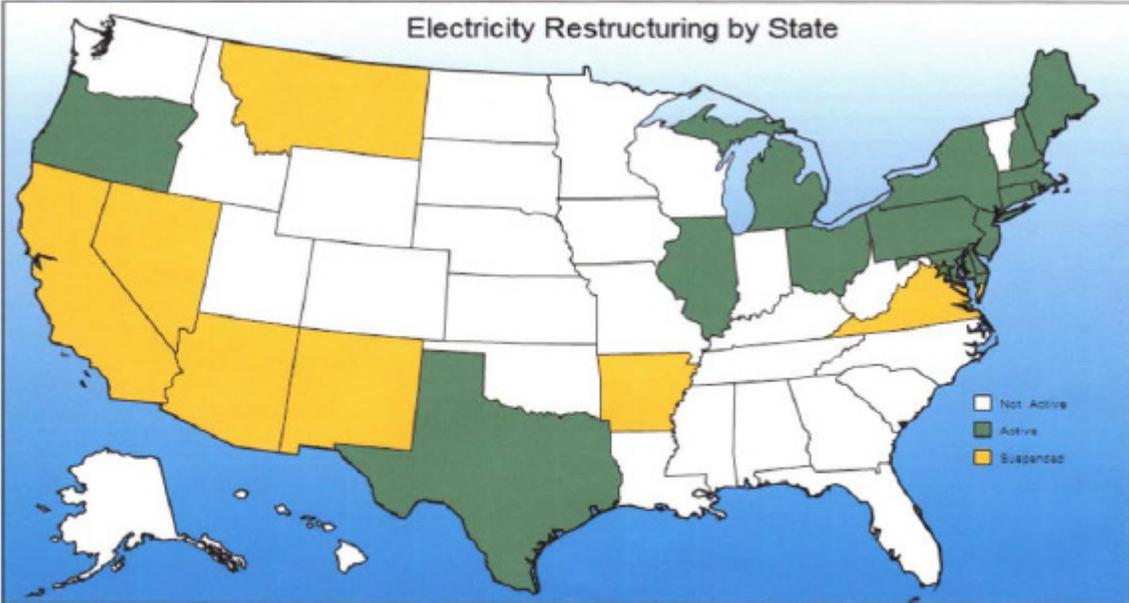
The darkly shaded area of California is in CAISO; the Southern part of Texas in a medium shade is in ERCOT; the medium shaded area of western Montana, North Dakota, South Dakota, Minnesota, Iowa, northern Missouri, Wisconsin, Illinois, northwestern Kentucky, Michigan, and Indiana are in MISO; the darkly shaded portion of northern Texas, southeastern New Mexico, Oklahoma, Kansas, Nebraska, southwestern Missouri, northwestern Arkansas, and part of Louisiana are in the SPP; the darker shaded area of northeastern Illinois, southwestern Michigan, northeastern Indiana, Ohio, Pennsylvania, West Virginia, Virginia, New Jersey, Maryland, Delaware, and northeastern North Carolina are in the PJM Interconnection; the areas of NYISO and ISO-NE are the same as those described above.

Figure 5. Electric Power Interconnections in the Continental U.S.



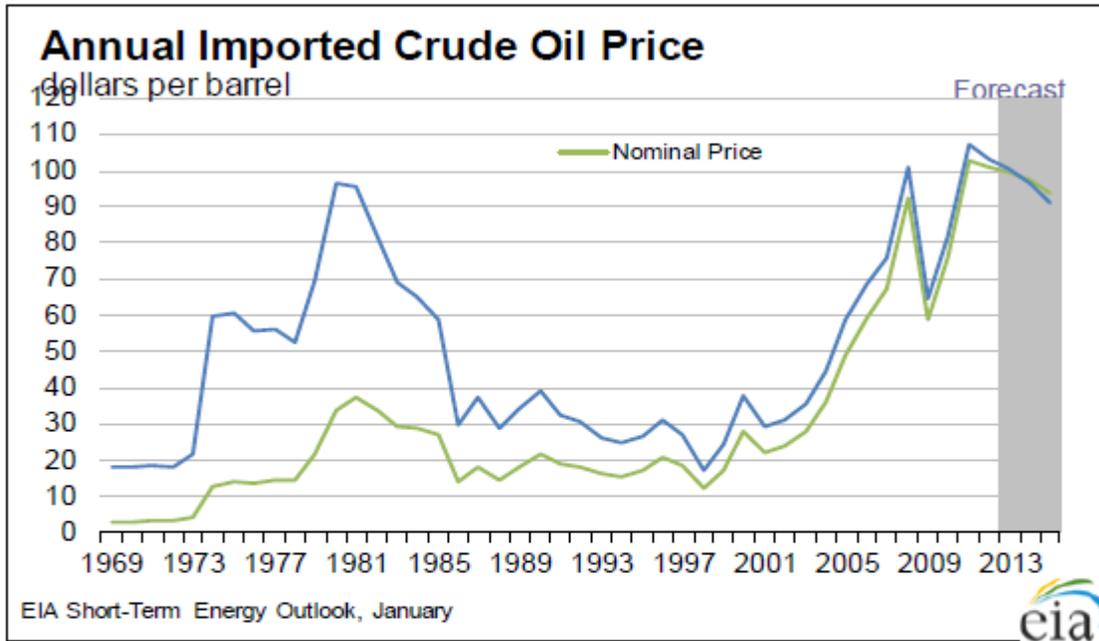
Source: U.S. Energy Information Administration. (2002). Reprinted in the U.S. General Accounting Office Report, *Lessons learned from electricity restructuring: Transition to competitive markets underway, but full benefits will take time and effort to achieve.* (GAO-03-271). Retrieved March 13, 2012, from <http://www.gao.gov/assets/160/157320.pdf>, p. 16.

Figure 6. Status of Electricity Market Restructuring by State, September 2010



Source: U.S. Energy Information Administration. (2010). *Status of electricity restructuring by state*. Retrieved March 13, 2012, from http://www.eia.gov/cneaf/electricity/page/restructuring/restructure_elect.html.

Figure 7. Annual Imported Crude Oil Price, 1969 - 2013.

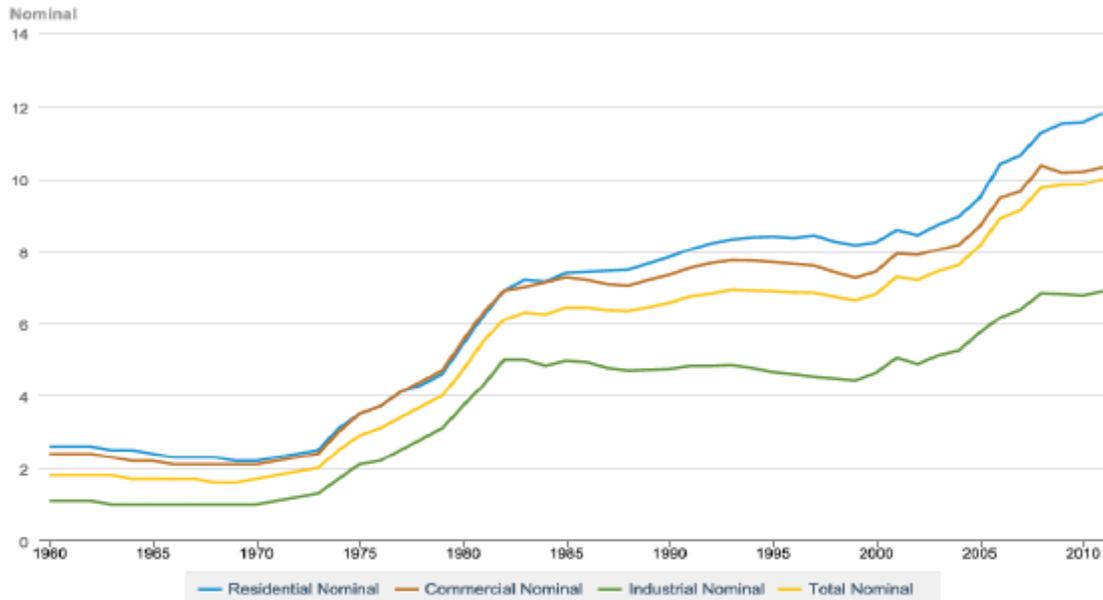


Source: U.S. Energy Information Administration. (2013). *Annual imported crude oil price*. Retrieved January 29, 2014, from <http://www.eia.gov/forecasts/steo/realprices/>.

A brief review of the figure above reveals that eras of utility financial problems, such as the era of stagflation or the period after the California electricity crisis, tend to coincide with increases in the cost of imported crude oil. The blue line represents real prices and the green line nominal prices.

Figure 8. Average Retail Nominal Prices of Electricity, 1960-2011

Table 8.10 Average Retail Prices of Electricity, 1960-2011 (Cents per Kilowatthour, Including Taxes)



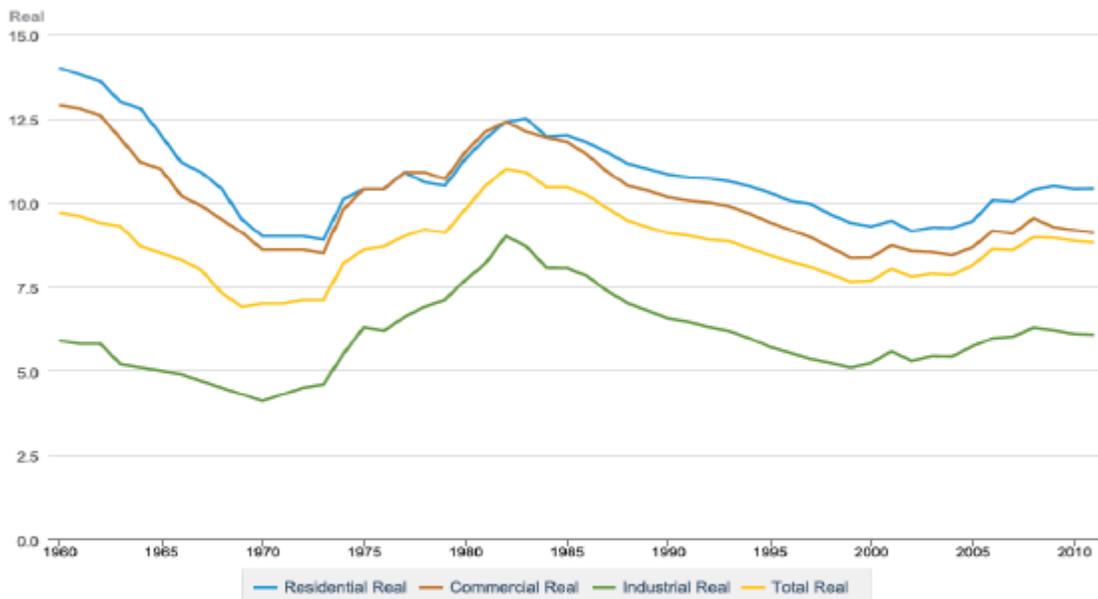
Source: U.S. Energy Information Administration

Source: U.S. Energy Information Administration. (2012). *Annual energy review 2011*. Retrieved February 23, 2013, from: <http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0810>.

The figure includes the average nominal retail electricity rates in the U.S. for Residential, Commercial, Industrial, Transportation, Other and Total Consumers in nominal and real prices from 1960 to 2011. Nominal prices reflect the price actually paid when the electricity was purchased.

Figure 9. Average Real Retail Prices of Electricity, 1960-2011

Table 8.10 Average Retail Prices of Electricity, 1960-2011 (Cents per Kilowatt-hour, Including Taxes)

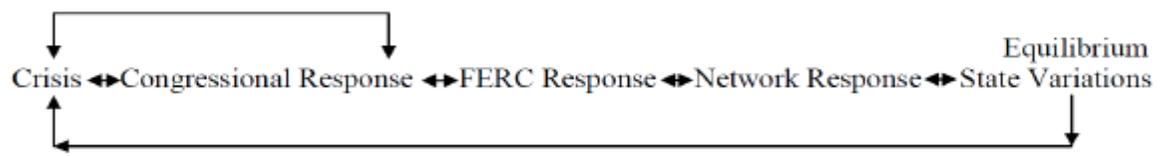


Source: U.S. Energy Information Administration

Source: U.S. Energy Information Administration. (2012). *Annual energy review 2011*. Retrieved February 23, 2013, from: <http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0810>.

The figure includes the average real retail electricity rates in the U.S. for Residential, Commercial, Industrial, Transportation, Other and Total Consumers in nominal and real prices from 1960 to 2011. Real prices reflect the price of electricity adjusted for inflation.

Figure 10. Crisis-Response Relationships



The figure above represents the crisis-response relationships explored in chapter 4.