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# The Politics of Electricity Restructuring across the American States: Power Failure and Policy Failure

**Phillip J. Ardoin and Dennis Grady**

All states have an energy policy. In some states, the political leadership explicitly lays out a strategy for diversifying energy supply options and ensuring a reliable, affordable supply. In other states, the policy is implicit in that it reflects what state policy leaders choose not to do. In the most comprehensive sense, a state's energy policy is the result of decisions that state leaders make (or do not make) regarding the supply of electricity to businesses and homes, which subsequently affect various transportation fuel supply options. In this investigation, the focus is on electricity policy rather than transportation fuel policy because the latter decisions are made in an entirely different policy sphere. Electricity policy engages fundamental issues of federalism, the regulatory process, interest group politics, and executive/legislative politics. Thus, it provides an interesting lens through which to examine the dynamics of state politics.

How a state handles its electricity policy is inextricably linked with its economic development prospects and environmental quality. The energy industry accounts for more than 7 percent of the nation's gross domestic product, or approximately $558 billion in expenditures (Energy Information Administration 2003). Electricity stakeholders are major economic and political players across the nation (Thomas and Hrebenar 2004). The price of electricity historically has been regulated by each state and, in most cases, still is; thus, electricity policy is of significant interest to states' business establishments. Furthermore, because many large economic sectors such as manufacturing, mining, and chemical processing are energy-intensive enterprises—industries that are highly competitive—the cost of electricity is a major factor in determining expansion and/or relocation.

The quality of the nation's air and water is directly tied to decisions on energy issues. Coal-burning for electricity production and petroleum products in vehicles are regarded as the primary sources of air pollution and global warming (i.e., nitrogen oxide, sulfur dioxide, and carbon dioxide) (Freese 2003; Rosenbaum 2003; Timney 2004). Further politicizing energy policy is the contentious issue of nuclear power. Most nonmilitary nuclear waste is the result of generating electric power, and a safe way to dispose of such waste has not yet been identified (Rosenbaum 2003). Thus, national and state decision makers, business and industry leaders, and the environmental

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community are all intensely attuned to the ebbs and flows of energy decisions made by myriad powerful actors.

Much of the activity in this policy area occurs outside the public spotlight and reflects typical regulatory relationships among traditional political elites—utility commissions, regulated utility companies, and large energy consumer groups (Chubb 1983; Gormley 1983). Three decades ago, political turmoil in the Middle East and the formation of the Organization of the Petroleum Exporting Countries thrust energy issues to the forefront of public attention as drivers waited in line at gas pumps and President Carter urged the American people to conserve energy by turning down their thermostats. More recently, rolling blackouts in California, the collapse of the world's largest energy trading company (Enron), the power outage of August 2003, political turmoil in the Middle East, and $60-a-barrel oil prices have become major headlines and have dictated the policy agenda across the nation. Added to the current political context is the most dramatic restructuring of the electricity market since its development in the 1930s.

## Statutory Context of Electricity Regulation and Deregulation

During the last half of the 1990s, the market for electricity underwent a transformation that challenged the traditional understanding of the roles utility companies, state regulatory entities, and national policymakers play in providing reliable and affordable electricity to customers. In order to understand the current political context confronting utility companies, regulatory bodies, legislatures, and consumers, it is necessary to review a brief history of electricity's legal and economic environments (Energy Information Administration 1997).

For almost 40 years following the passage of the Public Utility Holding Company Act in 1935, the statutory scene in electric utility regulation was tranquil. However, during the 1970s, things began to change. Market conditions within the electric industry shifted dramatically in response to the 1973 Arab oil embargo, the financial collapse of utility stocks following Consolidated Edison's dividend freeze in 1974, and the instability of the political situation in the Middle East stemming from the Iranian revolution of 1978. In response to these threats to the stability of the electricity market, Congress passed the Public Utilities Regulatory Policies Act of 1978 (PURPA) with the intent of ensuring greater energy security. Its effect was to open the door to competition in the electricity supply market by requiring utility companies to purchase electricity from independent generating facilities (known as qualifying facilities) that used cogeneration technology or generated less than 50 megawatts using renewable technologies.

In 1992, the Energy Policy Act opened up the wholesale market for electricity to nonutility generators of electricity. A new class of electricity suppliers was created—exempt wholesale generators—who were allowed to compete for the right to sell electric power. Further, Congress mandated that utilities provide wholesale power transmission services to third parties at cost-based rates, even if doing so caused them to expand their transmission capacity. Finally, the Federal Energy Regulatory Commission (FERC) was given the responsibility for implementing open access to the transmission grid as a way of fostering competition in the electricity wholesale market.

Following the 1992 legislation, FERC Orders 888 and 2000 were issued with the intent of fundamentally transforming the utility industry from a regulated industry to an open marketplace in which electricity would be generated and sold on the wholesale market much like any other commodity. Issued in 1996, FERC Order 888 created an open-access policy requirement for all transmission-owning entities under its jurisdiction. The order required transmission owners to provide equal access to all market participants on a first-come, first-served basis. In order to facilitate this open-access rule, FERC required that the vertically integrated utilities (typically investor-owned utilities [IOUs] that have generation, transmission, and distribution capabilities) functionally separate their distribution and transmission units. In essence, Order 888 shifted the function of the transmission grid from serving the transmission owners' interests (i.e., serving their own customers) to creating a common carrier system for electricity that would be open to market use, much like natural gas. As in most intergovernmental policy arrangements, FERC was responsible for regulating the interstate sale (i.e., transmission) of electricity and the rules for competition (i.e., antitrust regulation), while states were responsible for intrastate market (i.e., retail and wholesale) entry and pricing. Therefore, once the rules changed at the federal level, states were free to respond by opening the intrastate market.

In 1996, California and Rhode Island took quick advantage of this opportunity and passed landmark legislation to restructure their electric power industries in order to give their residents the right to choose their electricity supplier.[1] Many states rapidly followed suit: by 1998, 24 states had passed some form of utility-restructuring legislation. Then the momentum behind restructuring quickly slackened, primarily due to events that unfolded in California from 2000 to 2001. Rolling blackouts occurred during peak summer demand periods; electricity rates jumped from $0.08 per kilowatt hour to $0.38 per kilowatt hour, and one of the state's major electric companies—Pacific Gas and Electric—declared bankruptcy. The promise that open-market competition would drive down prices for the majority of rate payers was realized in few states as of mid-2006. The effect of retail competition on industrial rates is still the subject of debate in some restructured states such as Pennsylvania, New York, and New Jersey (Adams 2006). Clearly, policy innovation had failed in at least one state, and as of 2006, no state had restructured or examined restructuring.[2] Timney (2004, 76) summarized the situation: "A regulated system that most ordinary citizens thought worked well enough had been abandoned in favor of a wild and volatile free market that served the interests of a few large companies at the expense of small businesses and retail users in the state. There seemed to be a lot of losers in the state and only a few winners—most prominent of which were the energy trading companies that had lobbied aggressively for the plan in the first place."

Although much has been written on the causes of California's policy failure (see for example Borenstein 2002; Hirst 2001; Timney 2004), relatively few analyses have been conducted on the reasons why the policy innovation took hold so rapidly in so many states. This study reviews the literature on the topic and poses a model of policy adoption. The results are assessed to determine whether they comport with other policy-diffusion studies or if they depart from previous findings given the uniqueness of this issue.

## Factors Affecting Deregulation

Although state legislatures are the ultimate decision makers regarding energy deregulation, there are several factors in the policy process that influence the probability that a state will adopt such policies. Much of the literature (Ando and Palmer 1998; Andrews 2000; Berry 1979; Gormley 1983; Joskow 2000; Ka and Teske 2002; Steiner 2004; Teske 2004; White, Joskow, and Hausman 1996) on energy deregulation suggests that the presence and growth of regional price disparities laid the foundation for the waves of energy deregulation that began in 1996. Price disparities and resultant calls for change led to action from numerous political drivers, specifically interest groups and other institutional forces. Examined are the effects of industrial:residential price ratio disparities, the relative cost of energy in each state (measured by kilowatt-hour price), the selection process of public utility commissions (i.e., whether members are elected or appointed), legislative professionalism, the partisanship of state legislatures, interest group influences (measured as the proportion of population in manufacturing and number of major electric companies), and regional diffusion (measured by the proportion of nearby deregulated states) on the likelihood of a state adopting energy deregulation policies.

### Industrial:Residential Price Ratios

The disparity in electricity prices and the implications for consumers are noted by many scholars as the driving forces behind deregulation (Andrews 2000; Borenstein 2002; Borenstein and Bushnell 2000; Joskow 1997; Ka and Teske 2002; Moyer 1993; Steiner 2004; Teske 2004). Borenstein and Bushnell (2000) posited that the price gap originated with "uneconomic PURPA contracts and nuclear power investments" (Borenstein and Bushnell 2000, 47), whereas Ka and Teske (2002) attributed the initial price disparity to the Arab oil embargo. Whether attributed to PURPA contracts, nuclear investments, or the oil crisis of 1973, the widening price gap is purported to be a major factor in restructuring.[3]

A simple means of understanding these differences is to examine the industrial-sector price for energy per kilowatt-hour as a percentage of the residential-sector price for energy per kilowatt-hour. This computation provides a ratio of the relative cost industries pay compared with residential users. A higher ratio indicates that the industrial sector pays relatively more than the residential sector. In 1996, there was substantial variation in price ratios throughout the United States, with industrial users in Tennessee (77 percent) paying prices relatively equal to residential users, and industrial users in New York (40 percent) paying relatively less than residential users.[4]

Although residential and industrial users are both represented by interest groups who are concerned with limiting energy costs, industrial electricity user groups represent the more powerful interests in energy policy choices, as they are well organized and have direct incentives to participate in the energy policy process. Considering the general belief by industries that deregulation decreases their costs, it is hypothesized that industries in states with higher industrial:residential price ratios are more likely to pressure policymakers to deregulate.

### Kilowatt-Hour Prices

Although the ratio of industrial-to-consumer electricity prices likely is an important influence on a state's propensity to adopt electricity deregulation, the absolute price of electricity per kilowatt-hour for residential, commercial, and industrial users also likely plays a significant role in deregulation (Andrews 2000; Steiner 2004). Electricity rates vary considerably across the states; therefore, as the actual overall rates increase, the likelihood of a state deregulating increases.[5] Moreover, building on the earlier discussion of the relative power of industrial groups, it is expected that elevated costs in the industrial sector have the most substantial effect on deregulation. In order to fully examine the influence of absolute prices, separate models for price per kilowatt-hour as the average for all consumers and by sector (residential, commercial, and industrial) are tested.

### Public Utility Commissions

Public utility commissions (PUCs) play a critical role in the decision of a state to adopt electricity deregulation. As noted by Ka and Teske (2002), the support of a PUC for a deregulatory plan is critical to its success. Thus, the analysis differentiates between elected and appointed state PUCs. As Teske (2004) suggested, elected commissioners are more likely to be responsive to consumers' short-term interests than those who are appointed. It is therefore hypothesized that elected commissioners are more likely to support deregulation on the basis that it promises lower electricity rates for consumers, who are their constituents and on whose votes they rely.

### Legislative Professionalism

The effects of institutional forces on policy innovation have been noted by numerous scholars (Berry 1979; Joskow 1997; Ka and

Teske 2002; King 2000; Mooney 1994; Ringquist and Garand 1999; Stevenson and Penn 1995). Previous research suggests that the more professionalized a legislature is, the more likely it is to have the resources, expertise, and ability to actively explore (and ultimately adopt) policy innovations.

To test this hypothesis, King's (2000) measure of legislative professionalism for each state is employed in this study. King uses a modified version of Squire's (1992) method for measuring state legislature professionalism relative to that of Congress. King (2000) used three comparison points for state legislatures and Congress: compensation, days in session, and expenditures for service and operations (minus legislator compensation) per legislator (in constant dollars). King (2000) modified the third component, substituting expenditures for staff and support members for Squire's (1992) measure of the number of staff members. This modification supports Teske's (1991) finding in his analysis of the telecommunications industry that regulatory budgets are an effective measure of institutional power. Larger budgets allow for larger staffs, which leads to more fully developed analyses of regulatory choices (Teske 1991).

### Partisanship of State Legislatures

Previous scholars (Altman 1997; Ka and Teske 2002; Lester 1983; Ringquist 1993; Teske 2004) have noted the significant role of legislative professionalism as a predictor of state energy policy variation, but few have addressed the possible role of partisanship. Considering the general preference of the Republican Party for less government regulation and its stronger ties with business and industry groups, it is hypothesized that state governments that are controlled by the Republican Party are more likely to adopt electricity deregulation policy. This hypothesis is tested using a trichotomous variable coded –1 for Democratic-controlled state governments, 0 for divided state governments, and 1 for Republican-controlled state governments.

### Interest Group Influences

State legislatures are pressured by a range of interest groups to adopt or reject electricity deregulation. Because it is particularly difficult to determine interest group pressures on the issue of energy deregulation in a particular state, two proxies for measuring this concept are used in this study. The first measure replicates the analyses of Ka and Teske (2002), which use as a proxy for industrial interest group influence the workforce employed in manufacturing divided by the total state workforce. Ka and Teske (2002) adopted this measure based on the idea that manufacturing interest groups are most likely to be well organized and have incentives to participate actively in the legislative process by offering information and resources to elected officials in support of deregulation.

As a second and unique proxy for the influence and interest of the electric industry on deregulation in each state, the actual number of major electric power companies (as determined by FERC in 1996) is measured. The theory is that the greater the number of major power companies there are in a state, the more potential competition there is within that state. Thus, there is a greater likelihood that deregulation of the electric industry will be favored.

### Regional Diffusion

Explanations of regional diffusion are commonplace in the regulatory literature (Berry and Berry 1990; Gray 1973; Newmark 2002; Teske 2004; Walker 1969) and provide rationales for an analysis of regional diffusion. As Newmark (2002, 161) noted, "The strength of diffusion studies [lies] in their predictive ability to determine what factors, whether organization, geographic, or internal, will lead to program or policy adoption." Teske (2004) contended that as one state adopts a new policy, surrounding states are more likely to adopt the policy.

Walker (1969) found that states adopt policies analogous to those in neighboring states. He claimed that ambivalence within a state can be overcome when proponents of change can point to successful implementation in other states. Berry and Berry (1990, 400) noted, "Policy adoptions for nearby states provide a critical resource (information) for overcoming an obstacle (uncertainly) to innovation. . . . [I]t should be easier for politicians to justify adoption [of a policy that is unpopular to the electorate] to voters if it has first been adopted by nearby states."

Walker posits that once a policy is accepted among many states, that policy may become recognized as a legitimate state responsibility for noninnovating states. The contention is that the growth of intergovernmental organizations such as the Council of State Governments allows for greater contact among state leaders and increases the spread of information (Walker 1969). These intergovernmental organizations provide sources of new information and policy cues for decision makers from across the United States. Gray (1973) also found that diffusion typically occurs through the interaction of policy innovators from certain states and decision makers from other states. Further, innovativeness was for the most part found to be issue-specific.[6]

Building on the evidence produced by previous scholars regarding the significant impact of regional diffusion on the probability of states adopting new policies, the model of energy policy innovation employed in this study includes a measure of regional diffusion. This variable is measured simply as a ratio of the surrounding states that have adopted deregulation each year to the total number of surrounding states (Berry and Berry 1990). After one state deregulates its electricity market, the expectation is that other surrounding states will be more likely to deregulate.

## Data and Methods

The model follows Berry and Berry (1990) in using event history analysis—a pooled time-series, cross-sectional model—to determine whether diffusion plays a role in triggering deregulation in specific states. Discrete event history analysis focuses on the risk that the individual units (in this case, states) have of "experiencing the event" at a particular time (Berry and Berry 1990, 397). This model accounts for both regional and internal influences and predicts policy innovation for each state based on that state's characteristics (rather than a single set of characteristics from the initial time the policy innovation was adopted in the first state) and can predict whether a particular state will or will not innovate (Allison 1984; Berry and Berry 1990; Box-Steffensmeier and Jones 2004; Hosmer and Lemeshow 1999).

The analysis begins in 1996, the year in which states started to adopt deregulatory policy innovations; the end point is 2001, when momentum behind restructuring waned as a result of the events that unfolded in California from 2000 through 2001. Because of the censoring of event history data, all 47 states that are included in the analysis appear in the 1996 "risk set." Only 43 states reappear in the 1997 risk set because 4 states that adopted deregulatory policy innovation in 1996 are no longer observed in the risk set (see Figure 1).[7] The remainder of the risk sets follow this logic.

Although the actual implementation of electricity deregulation has varied considerably by state, the deregulatory bills have been quite similar across states. Thus, a binary variable (0, 1) is employed to measure the decision to adopt energy deregulation policies. This dichotomous variable captures the variance as reliably as other studies of state innovations that similarly employ an event history model (Berry and Berry 1990; Teske 2004). The event history base model of policy innovation is as follows: $Y$ (electricity deregulation 0, 1) = $B_0 + B_1$ industrial:residential price ratio + $B_2$ kilowatt-hour prices + $B_3$ elected public utility commission + $B_4$ legislative professionalism + $B_5$ Republican party control + $B_6$ proportion of population in manufacturing + $B_7$ number of major electric companies + $B_8$ proportion of nearby deregulated states.

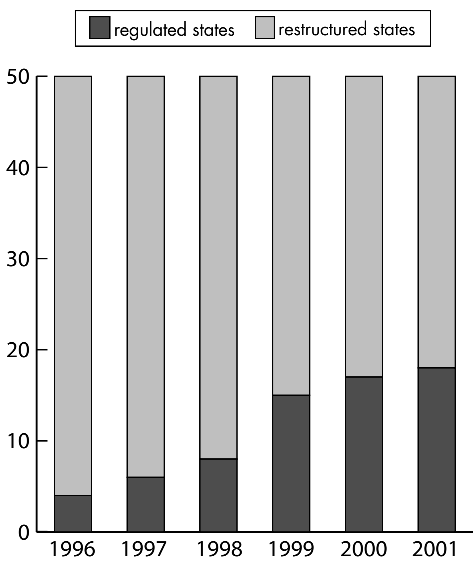
## Analyses and Results

The results of the base model of state policy innovation are reported in Table 1.[8] The overall model is quite strong (Wald chi-square = 60.43; $p < .001$). Of the eight explanatory factors, four meet the traditional standards for statistical significance. Although the remaining variables do not meet the traditional standards, their coefficients are in the hypothesized direction, except for the variables "industrial:residential price ratio" and "proportion of population in manufacturing."

Among the four statistically significant factors in the model of electricity restructuring, price per kilowatt-hour is most significant. As hypothesized, states that pay higher prices per kilowatt-hour are more likely to restructure than those with relatively lower prices. More specifically, the model indicates that a $0.10 increase in a state's price per kilowatt-hour increases its probability of adopting electricity restructuring policies by 23 percent. Considering that the price per kilowatt-hour varied throughout the study from less than $0.04 to more than $0.11, price per kilowatt-hour clearly is a substantial factor in understanding electricity restructuring. Undoubtedly, high energy prices provide legislators with strong incentives and the motivation necessary to examine and ultimately adopt energy policies aimed at alleviating these constituent expenditures. It is noteworthy that when price per kilowatt-hour for residential, commercial, and industrial sectors were included individually, the results indicated that no single industry had a significantly greater impact on policy adoption.

Although the results of the analyses for price per kilowatt-hour conform with the stated hypotheses, the results for industrial:

***Figure 1***. 1996–2001 Cumulative Electricity Deregulation




*Source*: State electricity tables (Washington, DC: Energy Information Administration, U.S. Department of Energy). www.eia.doe.gov/emeu/states/_states.html.

*Note*: The years and states in which energy restructuring policies were adopted are as follows: 1996—California, New York, Pennsylvania, and Rhode Island; 1997—Maine and Massachusetts; 1998—Arizona and Connecticut; 1999—Delaware, Illinois, Maryland, New Jersey, Ohio, Texas, and Virginia; 2000—Michigan and New Hampshire; 2001—Oregon.

***Table 1***. Event History Model of Electricity Deregulation, 1996–2001

| **Explanatory Factors** | **Theory** | **Coefficient** | **Robust Standard Errors** | ***z*-score** |
|---|---|---|---|---|
| Industrial/residential price ratio* | + | −0.019 | 0.011 | −1.82 |
| Kilowatt-hour price** | + | 0.211 | 0.053 | 3.94 |
| Elected public utility commission | + | 0.437 | 1.265 | 0.35 |
| Legislative professionalism* | + | 3.492 | 1.897 | 1.84 |
| Republican party control* | + | 0.230 | 0.139 | 1.65 |
| Proportion of population in manufacturing | + | −5.446 | 5.495 | −0.99 |
| Number of major electric companies | + | 0.138 | 0.134 | 1.03 |
| Proportion of nearby deregulated states | + | 0.238 | 0.282 | 0.84 |

$^{*}p < .05$; $^{**}p < .01$; Wald chi-square = 60.43; pseudo log likelihood = −38.709; $N = 185$.

residential price ratio are significant but in the opposite direction compared with what previous scholars have found (Borenstein and Bushnell 2000; Ka and Teske 2002). Specifically, states in which the difference between residential and industrial rates are greatest are the least likely to adopt deregulation. These results suggest that Teske (1991) may have been correct in assuming that high industrial: residential price ratios in a state are perhaps indicative of the lack of influence industrial interests maintain in these states. If the industrial entities in a state do not have the ability to attain favorable industrial:residential price ratios, they likely lack the influence, resources, or ability to initiate electricity restructuring.

As previous analyses of policy innovation have found (Ringquist and Garand 1999; King 2000), legislative professionalism has a positive and statistically significant impact on the probability of a state adopting electricity restructuring. As noted previously, the more professional legislatures are, the more likely they are to have the resources, time, expertise, and ability to actively explore (and ultimately adopt) policy innovations compared with less professionalized legislatures. Specifically, a 1 standard deviation increase in a state's legislative professionalism increases its probability of restructuring by 45 percent.

Partisan control of state government also was found to significantly influence the probability of a state adopting electricity deregulation. In particular, for each additional branch of state government controlled by the Republican Party, there is a 26 percent increase in the probability of the state adopting electricity deregulation policies. The results indicate that the ideological and constituent interests of the Republican Party are priming factors for policy innovation in this area.

The additional factors included in the event history base model failed to attain traditional levels of statistical significance. The regional diffusion variable (i.e., proportion of nearby deregulated states) was not supported, even though the concept of regional diffusion is commonplace in the regulatory literature and has been found to be significant in previous analyses of electricity restructuring (Ka and Teske 2002).

Considering the strong theoretical underpinnings but lack of statistically significant findings for the policy diffusion factor, the base model was reexamined with a particular focus on this variable. Policy diffusion was highly correlated (Pearson correlation coefficient = .524; $p < .001$) with price per kilowatt-hour. Considering these results and the clear potential for multicollinearity between these two variables (i.e., regional diffusion and policy diffusion), the model was retested after dropping the price per kilowatt-hour variable. As expected, the regional diffusion variable in the reduced model was statistically significant and in the hypothesized direction. Consequently, it is argued that regional diffusion plays at least a nominal role in a state's adoption of electricity restructuring.

## Conclusion

The broad purpose of this analysis was to provide an improved understanding of state policy innovation by focusing on the role of policy diffusion. In particular, a model of policy innovation that examined the factors that influence the probability of a state restructuring its electric utility policies was tested. The model developed for this study was built on the work of numerous scholars who have addressed state policy innovations, especially that of Ka and Teske (2002). In addition to several traditional factors, the model included several unique and innovative factors theoretically related to electricity policy innovation. Most notably, distinct from previous analyses, the model included the actual price per kilowatt-hour, the partisanship of the state government, the number of major power suppliers within the state, and a measure of regional diffusion.

The results of the model of electricity restructuring generally support the hypotheses and, more broadly, the literature regarding policy innovation. The most salient findings are linked to the examination of new factors that previous scholars have overlooked in this policy domain. The statistically significant findings regarding energy prices were not unexpected. States in which constituents pay the highest energy prices are the states that are most likely to examine and ultimately adopt policy innovations. Legislatures in states in which consumers enjoy relatively low energy prices have fewer incentives to look for alternatives to their current energy policies, whereas states with high energy costs have greater reason to search for alternatives. The analysis also revealed that states that have professionalized legislatures and that are under Republican control were most likely to adopt electricity restructuring. This finding supports the hypothesis that Republican-controlled governments are more likely to adopt policies that lead to deregulation and smaller government and also support key business constituencies. Although numerous scholars have examined the Republican Party's focus in recent years on policies related to social conservatism, these findings suggest that business constituencies and the goal of more limited government continue to significantly influence policy choices.

Earlier state deregulation efforts in telecommunications and natural gas for the most part have been considered to be successes. One might therefore assume that professional legislatures (and their staffs) would have drawn analogies to their own states and regarded successful deregulatory efforts as precedents for electricity deregulation. In retrospect, however, electricity deregulation generally has been considered to be a failure. The policy entrepreneur driving deregulation was the energy trading industry led by the now-defunct Enron Corporation. Recalling the economic climate of the mid-1990s, during which time fortunes were being made on a "new economy" of trading ephemeral commodities like energy futures and margins, the most sophisticated legislators might have thought that they were on the cutting edge of this new economic era. It likely would have been considered "old economy" to hold on to 60-year-old regulatory regimes in which entrepreneurs were beholden to utility commissions. It is therefore perhaps not so surprising that the most professionalized legislatures were the most likely to advocate such a risky and ultimately failed policy innovation.

Although it is now understood that electricity deregulation was an anomaly compared with successful efforts to deregulate utilities, the model of policy diffusion was upheld in this context. Economic interests continue to represent a key factor in understanding the policy choices of state legislatures. States that face high energy costs are most likely to look for opportunities to reduce those costs. Furthermore, state legislatures with the greatest resources and expertise are quickest to explore and adopt policy innovations in response to high energy costs. States in which the general policy preferences of those in power favor deregulation also are more likely to restructure.

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**Phillip J. Ardoin** *is an assistant professor and director of the M.A. program in the Department of Political Science and Criminal Justice at Appalachian State University. His research and teaching interests include legislative politics, constituent representation, presidential elections, and African American Partisanship. His work has been published in the* Journal of Cultural Diversity, Justice Policy Journal, *and* Journal of Politics, Politics & Policy.

**Dennis Grady** *is a professor of political science and director of the Energy Center at Appalachian State University. He has published work on American state policy issues ranging from economic development to renewable energy. His current focus is on environmental politics in North Carolina. In addition to working closely with policy makers in North Carolina, he serves on the state Climate Action Change Advisory Group.*

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## Notes

1. Some commentators confuse "restructuring" of electric utilities with "deregulating" the utilities. The

providers of electric services are still regulated carefully by state commissions. Restructuring refers to the type of market within which the regulated utilities operate. As opposed to the monopolized market required prior to the 1992 Energy Policy Act, the restructured market allowed companies to engage in retail competition with regulated markets.

2. The U.S. Energy Information Administration suspended its comprehensive tracking of restructuring activity across the states in 2001, which perhaps reflects states' lack of interest in putting restructuring on their political agendas. Further, Samuel J. Ervin III, a commissioner on the North Carolina Utility Commission and a member of the National Association of Utility Regulatory Commissions, has said that further restructuring activity is not anticipated across the states in the foreseeable future (Ervin, personal communication, January 27, 2006).

3. Joskow (1997, 125) has defined the price gap as being between customers who receive "unbundled" prices (i.e., those who are responsible for paying for only transmission and distribution costs) and those who pay bundled prices (i.e., those for whom the cost of generation services is included in the total costs). To understand the price gap, one must appreciate the direct correlation between kilowatt hour prices and "sunk costs." Sunk costs are associated with construction of transmission systems and new generation facilities. Joskow (1997, 127) found that sunk costs represent nuclear power investments and expensive contracts that utilities were required to sign under PURPA requirements. At all times, electricity producers must generate at maximum capacity (i.e., the amount necessary for the highest daily demand of the year), which creates high prices for peak generation. When the high cost of nuclear generation is added to this equation, the cost becomes higher than that for conventional electricity producers. As a result, states that heavily invest in nuclear energy would also typically be on the higher end of the price gap and adopt policies that would lower prices. Several authors link price disparity to sunk costs (Borenstein and Bushnell 2000; Borenstein 2002; Joskow 1997; Moyer 1993). Borenstein and Bushnell (2000, 47) found that states that do not have sunk costs are less likely to restructure. They posit that prices fell in California as a result of paying off sunk investments in nuclear power plants and the expiration of expensive PURPA contracts, not deregulation (Borenstein and Bushnell 2000, 51).

4. For the period of the analysis (1996–2001), the mean industrial:residential kilowatt-hour price ratio is .58, with a standard deviation of .07, a maximum of .95 (Nevada 2001), and a minimum of .38 (Montana 2000).

5. For the period of the analysis (1996–2001), the mean price per kilowatt-hour for residential consumers was \$0.078 (minimum \$0.05, maximum \$0.14); \$0.068 (minimum \$0.042, maximum \$0.125) for commercial users; and \$0.046 (minimum \$0.025, maximum \$0.098) for industrial users.

6. Gray (1973, 1185) did not find strong correlations among policy innovation factors for the policy fields studied; instead, innovativeness was time- and issue-specific.

7. The data set does not include Hawaii, Alaska, and Nebraska. Hawaii and Alaska were dropped from the analysis for theoretical reasons. They are not part of the continental United States and therefore are not subject to regional diffusion—a key factor in the analysis. They also have relatively extreme climates and unique economies that likely make the factors influencing energy policy in their state legislatures unique. The results of an additional analysis of these two states produced coefficients and levels of significance nearly identical to those reported in other states. Nebraska was dropped from the analysis for purely methodological reasons: because Nebraska has a nonpartisan legislature, legislative partisanship data cannot be collected.

8. The event history model reported in Table 1 and discussed throughout this section incorporates a Cox Proportional Hazard regression model with robust standard errors. For a discussion of the steps employed in interpreting the coefficients of a Cox Proportional Hazard model, see Hosmer and Lemeshow (1999).

## References


Adams, Paul. 2006. Paul Adams on electricity deregulation: Reporter answers selected readers' questions on pending BGE rate increases. *Baltimore Sun*, March 16. www.baltimoresun.com.

Allison, Paul D. 1984. *Event history analysis: Regression for longitudinal data, quantitative applications in the social sciences*. Beverly Hills: Sage.

Altman, J. 1997. The politics of electric utility regulation: Explaining energy efficiency policy in the states. Ph.D. diss., University of Tennessee, Knoxville.

Ando, A. W., and K. Palmer. 1998. *Getting on the map: The political economy of state-level electricity restructuring*. Washington, DC: Resources for the Future.

Andrews, C. 2000. Diffusion pathways for electricity regulation. *Publius* 30:17–34.

Berry, William D. 1979. Utility regulation in the states: The policy effects of professionalism and salience to the consumer. *American Journal of Political Science* 23:263–77.

Berry, Frances Stokes, and William D. Berry. 1990. State lottery adoptions as policy innovations: An event history analysis. *American Political Science Review* 84: 394–415.

Borenstein, Severin. 2002. The trouble with electricity markets: Understanding California's restructuring disaster. *Journal of Economic Perspectives* 16:191–211.

Borenstein, Severin, and James Bushnell. 2000. Electricity restructuring: Deregulation or reregulation? *Regulation* 23:46–52.

Box-Steffensmeier, Janet M., and Bradfor S. Jones. 2004. *Event history modeling: A guide for social scientists*. New York: Cambridge University Press.

Chubb, John E. 1983. *Interest groups and the bureaucracy: The politics of energy*. Palo Alto, CA: Stanford University Press.

Energy Information Administration. 1997. *Electricity prices in a competitive market: Marginal cost pricing of generation services and financial status of electric utilities. A preliminary analysis through 2015*. tonto.eia.doe.gov/FTPROOT/electricity/0614.pdf. Accessed February 2005.

————. 2003. *Status of state electricity restructuring activity*. www.eia.doe.gov/cneaf/electricity/chg_str/restructure.pdf. Accessed February 2005.

Freese, Barbara. 2003. *Coal: A human history*. Cambridge, MA: Perseus Publishing.

Gormley, William T. 1983. Policy, politics, and public utility regulation. *American Journal of Political Science* 27:86–105.

Gray, Virginia. 1973. Innovation in the states: A diffusion study. *American Political Science Review* 67:1174–85.

Hirst, Eric. 2001. *The California electricity crisis: Lessons for other states*. www.heartland.org/pdf/12529.pdf. Accessed March 2005.

Hosmer, David W., and Stanley Lemeshow. 1999. *Applied survival analysis: Regression modeling of time to event data*. New York: John Wiley and Sons.

Joskow, Paul L. 1997. Restructuring, competition, and regulatory reform in the U.S. electricity sector. *Journal of Economic Perspectives* 11:119–38.

————. 2000. Deregulation and regulatory reform in the U.S. electric power sector. In *Deregulation of network industries: What's next?* ed. P. A. Winston. Washington, DC: Brookings Institution Press.

Ka, Sangjoon, and Paul Teske. 2002. Ideology and professionalism: Electricity regulation and deregulation over time in the American states. *American Politics Research* 30:323–43.

King, James D. 2000. Changes in professionalism in U.S. state legislatures. *Legislative Studies Quarterly* 25:327–43.

Lester, James. 1983. Hazardous waste politics and public policy: A comparative state analysis. *Western Political Quarterly* 36:258–85.

Mooney, Chris. 1994. Measuring U.S. state legislative professionalism: An evaluation of five indices. *State and Local Government Review* 26:70–78.

Moyer, R. Charles. 1993. The impending restructuring of the electric utility industry: Causes and consequences. *Business Economics* 28:40–44.

Newmark, Adam J. 2002. An integrated approach to policy transfer and diffusion. *Review of Policy Research* 19:151–78.

Ringquist, Evan. 1993. Does regulation matter? Evaluating the effects of state air pollution programs. *Journal of Politics* 55:1022–45.

Ringquist, Evan, and James Garand. 1999. Policy change in the American states. In *American state and local politics*, ed. R. Weber and P. Brace. New York: Chatham House.

Rosenbaum, Walter A. 2003. *Environmental politics and policy*. 5th ed. Washington DC: CQ Press.

Squire, Peverill. 1992. Legislative professionalization and membership diversity in state legislatures. *Legislative Studies Quarterly* 17:69–79.

Steiner, F. 2004. The market response to restructuring: A behavioral model. *Journal of Regulatory Economics* 25:59–80.

Stevenson, Rodney E., and David W. Penn. 1995. Discretionary evolution: Restructuring the electric utility industry. *Land Economics* 71:354–65.

Teske, Paul. 1991. Interests and institutions in state regulation. *American Journal of Political Science* 35: 139–54.

————. 2004. *Regulation in the states*. Washington, DC: Brookings Institution.

Thomas, Clive S., and Ronald J. Hrebenar. 2004. Interest groups in the states. *Politics in the American states: A comparative analysis*, ed. V. Gray and R. L. Hanson. Washington D.C.: CQ Press.

Timney, Mary M. 2004. *Power for the people: Protecting states' energy policy interests in an era of deregulation*. Armonk, NY: M.E. Sharpe.

Walker, Jack L. 1969. The diffusion of innovations among the American states. *American Political Science Review* 63:880–99.

White, Matthew W., Paul L. Joskow, and Jerry Hausman. 1996. Power struggles: Explaining deregulatory reforms in electricity markets. *Brookings Papers on Economic Activity: Microeconomics* 1996:201–67.