

DEFINING THE NEW POLICY



CONFLICTS

Failing to address and adapt to the new ratemaking realities could result in increased costs for the economy.

BY MARK A. JAMISON AND PAUL SOTKIEWICZ

Precisely because change is constant, the foundations have to be extra strong.—Peter F. Drucker

The approaching 100th anniversary of regulation by public utility commissions in the United States calls for some reflection. Which ideas are our true foundations and which need to adapt to new realities?

Are telephone subsidies a foundational principle, or do new realities in competitive telecommunications force us either to give up traditional pricing and subsidies or face the

prospect of some services and service providers disappearing? Are new energy and environmental policy realities, changing world energy markets, and growing demand challenging consumers to adapt to higher prices and price volatility; challenging producers to make long-term construction plans without the benefit of long-term policy stability; and challenging environmentalists to reconsider their opposition to advanced coal

and nuclear technologies to meet future demand? Failing to address and adapt to new realities likely will result in increased costs for the economy.

The difficulty of addressing these real-world challenges was the focus of the recent Public Utility Research Center (PURC) at the University of Florida Annual Conference, “A Century of Utility Regulation: Lessons We’ve Learned.” A few issues that were prominent at the conference—universal service in telecommunications and building new electricity generating capacity, as well as the obstacles policymakers face in resolving these issues—demand a closer look,¹ using a conflict-analysis framework.

Conflict-Analysis Framework

Utility policy is filled with conflict: Environmentalists and local communities often are at odds with utilities and developers who see a need for new electricity generating plants and transmission lines. State and federal regulators disagree on the proper balance between pursuing national interests and attending to state and local differences.

How can policymakers work through these conflicts? The first step is to discover the true natures of the conflicts. Lord (1979) and Shabman (2005) have developed a conflict analysis framework that identifies four types of conflict.²

The first is conflict over facts: Examples include, “How much of the future demand for electricity can be addressed by energy efficiency, conservation, and renewable resources?” “What prices are customers willing and able to pay for telecommunications services?”

Fact conflicts such as these can be resolved through research and technical analysis.

Conflicts over the differential impacts of regulatory policies make up the second type of conflict—interest or distribution conflicts. Consider, for example, the hardening of the electric transmission and distribution systems in coastal states to better withstand hurricanes. Upgrading technical and maintenance standards creates costs, which raises the issue of who pays. Another issue is where and when these system improvements will occur, which affects the distribution of benefits. Different voting blocks will have different views on these benefits and costs.

Adaptive Work

The first two types of conflict are transactional in that people can conduct studies or negotiate deals to resolve the conflicts and no one has to engage in adaptive work—the work of adjusting how we think, what we value, and how we behave in response to new situations.³ In contrast with the fact- and interest-based conflicts, resolving the third and fourth types of

conflicts (conflicts over values and authority) requires adaptive work.⁴ Value conflicts reflect preferences over, for example, the importance of energy prices and security versus environmental and health concerns. Authority conflicts—disagreements over who will make decisions that determine direction and order—are a special form of value conflict. The National Interest Transmission Corridor provision of the Energy Policy Act of 2005 (EPACT) raised authority conflicts by shifting authority for transmission-line siting from primarily state regulators to the U.S. Department of Energy and the Federal Energy Regulatory Commission.

Work is wasted and progress is delayed if we do not identify the real conflicts in an issue. For example, in one jurisdiction, stakeholders on one side of a debate over building new generating facilities pursued an extended argument over the design and choice of a consultant study on how to meet future power needs, rather than addressing the actual conflict over the trade-off between environmental concerns and the size of people’s electricity bills. The group feared it might lose that debate. Efforts to resolve the false conflict delayed dialogue on the real conflict. Once the consultant study was completed, a second false conflict arose over forecasts and assumptions. Although on the surface this appeared to be a fact conflict, its real effect was to further delay dialogue on another challenge over how much risk is tolerable, and who should bear that risk.

This conflict framework can be applied to two topics addressed at the PURC conference: universal service in telecoms and meeting energy demands.

Universal Service Traditions

The United States has four programs for universal service: 1) the High Cost Fund (HCF), which provides financial support to primarily small, high-cost telephone companies;⁵ 2) low-income support, consisting of the Lifeline and Link-Up America programs, which provide local telephone price discounts to low-income households; 3) rural health care; and 4) support for schools and libraries.⁶

The HCF is a legacy program with roots in the monopoly era, during which AT&T distributed long-distance revenues across states and across local telephone companies (including the independent companies), in part to average prices across the country.⁷ The Lifeline and Link-Up programs were developed in the early 1980s to ensure that the introduction of subscriber line charges (which were in effect price increases for local telephone service) did not make service unaffordable for low-income households. The rural healthcare and schools and libraries programs were created by the U.S. Telecommunications Act of 1996.

The Universal Service Administrative Co. (USAC), »

which administers all of these programs, estimates that the programs will provide \$7.3 billion in support in 2006, broken down as follows: high cost (\$4.2 billion), low income (\$820 million), rural healthcare (\$45 million), and schools and libraries (\$2.25 billion).⁸ Funding for these programs exceeds federal funding for such programs as public housing, the Food and Drug Administration, the Center for Disease Control, and the Federal Bureau of Investigation.⁹

Analyzing the Universal Service Challenge

The facts about the universal service programs are well-known and accepted. Controversy surrounds the distributional effects, questions of jurisdiction, and purposes of the programs. These controversies relate primarily to the HCF and low-income programs.

The distribution issues involve who benefits and who pays. Traditionally, high-cost support was for small, primarily rural wireline telephone companies, and was intended as a replacement for payments that these companies used to receive from AT&T before the breakup in 1984 (and have received from access charges since that time).¹⁰ Competition in long distance made the AT&T-centric system unworkable, and the development of competition in local service made the access charge-based system unworkable.

Prompted in part by the Telecommunications Act of 1996 requirement that telephone-subsidy systems be competitively neutral, the Federal Communications Commission (FCC) responded to these competitive realities by funding all of the federal universal service programs (those now administered by the USAC) through fees assessed against interstate revenues received by telecommunications carriers. In the case of the high-cost program, the FCC allowed small telephone companies to draw from the fund monies that they would lose from lowering their access charges to more competitive levels.

This raised issues of competitive neutrality because rivals to the traditional companies would be at a competitive disadvantage unless they, too, could draw funds from the HCF. So the FCC allowed the new competitors to receive high-cost support. The result has been that the fund's growth rate has increased rapidly. New rivals applying for high-cost support account for most of this growth rate, but most of the increase in dollars of support has come from the traditional companies lowering their access charges and replacing the revenue with monies from the HCF.¹¹

In addition to raising the issue of who should receive high-cost support, competition creates issues of who should pay. Competition from non-telecommunications services, such as Voice over Internet Protocol (VoIP) and broadband local access via cable modems, and from mobile telephony is decreasing

the interstate revenues that the FCC assesses to fund universal-service programs. Since 2002, the FCC's fee has increased from 6.8 percent of interstate revenue to 10.2 percent, and all indications are that this percentage will continue to grow.¹² Furthermore, the distribution of payments into the funds and receipts from the funds are not uniform across the country: Florida, for example, provided almost 7 percent of the funding for universal service programs in 2003 but received only 2.5 percent of the funds, for a net loss of \$234 million for the state. In contrast, Arkansas and Kansas together received 4.6 percent of the funds, but contributed only 1.8 percent, for a net gain of \$156 million for these states.¹³

Facing the Hard Questions

These distribution issues arise because of the underlying adaptive challenges of jurisdiction and program goals. The HCF's growth results from conflicts among the goal of effective competition in all areas of telecommunications, the preservation of price averaging, and the desire to protect small, rural telephone companies from the financial consequences of unregulated competition. It is impossible to achieve simultaneously all three of these aims because cost-oriented prices and the risk of financial failure are necessary for competitive-market forces to work. Key adaptive questions for policymakers include: Should customers in the subsidized areas give up the choices, innovations, and efficiencies that come from competition or give up some of the low prices that they have enjoyed in the past? What roles, if any, will traditional small telephone companies have in the future of telecommunications?

Adaptive challenges in jurisdiction contribute to the funding and design controversies. The FCC collects fees based on a shrinking pool of interstate revenues because states resist allowing the FCC to assess fees against intrastate revenues and the FCC lacks jurisdiction over non-telecommunications services. Absent decreases in the size of the universal service programs, the current funding mechanism will become unworkable as customers and companies continue to find ways to bypass the currently escalating assessment. Policymakers must ask themselves an adaptive question: How important is having the FCC fund the growing universal service programs relative to keeping state and non-telecommunications services free from the FCC's jurisdiction?

The question of jurisdiction takes us to our final universal service issue, namely, the continuation of current low-income programs. Regulators and policymakers have become concerned about the low participation rate of low-income households in these programs: Less than one-third of low-income households participate.¹⁴ Regulators have pressured telephone companies to sign up more low-income households and have

launched national and local marketing efforts. What is the policy goal: High program participation or high numbers of low-income households with telecommunications service?

Studies at PURC have found that while only 12 percent of Florida's eligible low-income households receive the Lifeline discounts, an additional 80 percent of low-income households purchase wireline or mobile telephone service even without participating in Lifeline.¹⁵ Clearly the program is having little effect on low-income purchases of telecommunications. A key adaptive question for policymakers is: What is more important—"success" of the Lifeline program or success in helping low-income households participate in advanced telecommunications?

Achieving the latter aim probably would involve a decrease of federal oversight. PURC research has shown that optimal program design varies across states.¹⁶

The Promise of the Recent Past

A major shift in thinking and policy took place in the electricity industry throughout the 1990s. Competition was to replace vertically integrated, regulated monopolies; end cost-of-service regulation for generation; improve efficiency; and lower consumer prices. Electricity generation was going to be far cleaner than in the past, whether existing facilities were retired or retrofitted with the latest pollution-abatement technologies, or fired by cleaner fuels.

Concurrent with this shift in thinking and policy was the general downward trend in electricity prices, and natural-gas prices that were lower and more stable than prices in the pre-Wellhead Decontrol period of the 1970s and 1980s. To meet these policy demands, the last decade saw unprecedented additions of natural-gas-fired generating capacity of more than 200 GWe.¹⁷

It seemed we could have our cake and eat it, too. That is, we could have low electricity prices and shift risk from consumers to investors. Moreover, we could have more environmentally friendly electricity generation and provide financial incentives for renewable energy resources without much of an increase in rates. We could have all of this without worrying about the security of supply issues that dogged the energy industry in the 1970s.

It seemed as if the two conflicts endemic to the industry—cost/price vs. environment, and the total level of acceptable risk vs. the burden of the risk—had been solved, while the security of supply simply was ignored or forgotten.

Reality and Unfulfilled Promises

Unfortunately, current realities show that the conflicts were not resolved, but simply postponed. While wholesale markets and competition have taken root and continue to survive and expand in the Northeast, Mid-Atlantic, and the Midwest, one

could argue that the promise of competition has been stymied by poor market design, market power and manipulation, high fuel prices, and a lack of the necessary energy infrastructure in electricity transmission, natural-gas pipelines, storage, and LNG facilities.¹⁸

Retail consumers are facing the real price for power after having been shielded for several years under rate freezes. The industry is just now recovering from the financial and structural meltdown of extended periods of high prices in Western markets.¹⁹

Natural-gas prices, on a yearly average, have risen from around \$2/MMBtu in the mid-1990s to almost \$8/MMBtu in 2005 and are projected over the long term to be in the \$6/MMBtu to \$7/MMBtu range.²⁰

Additionally, the traditional natural-gas production basins are projected to continue experiencing declining production, and there will be a greater reliance on production from new regions as well as on imports of LNG to meet demand.²¹

Finally, natural-gas markets have become far more volatile in recent years in response to the changing realities in our production basins, but also to disasters such as hurricanes affecting both transport and production. In contrast, North America is well endowed with coal resources that dwarf the remaining gas reserves, and coal prices relative to natural-gas prices have been quite stable over time.²²

These new realities make coal-fired generation more attractive due to the price of coal relative to natural gas as fuel, which more than offsets the higher capital costs of a new coal facility, including the costs associated with the more stringent Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR). Furthermore, coal-fired generation is forecasted to be less expensive going forward than all viable renewable resource options for Florida and the Southeast.²³

Often overlooked in the above discussion is the idea that we have been living on high levels of investment and capacity in electricity transmission and generating capacity from the previous generation.²⁴ Many areas of the United States are at a point where new generating capacity and new transmission capacity are needed. The costs of not having new baseload capacity can be seen in the increased use of natural-gas facilities and the increased costs of generation. The costs of not having adequate transmission capacity largely have been hidden but have become more transparent in market environments and are no less real in vertically integrated monopoly environments. New transmission capacity will be needed to move power from new facilities, whether they be coal-fired base-load facilities or renewable energy sources.

If natural gas is to remain a significant fuel for electricity generation, new exploration and production infrastructure will be necessary. This not only includes additional rigs and >>

platforms, but also will include new LNG import facilities as well as new pipeline expansions to handle changing flows of gas from the emerging production and import areas.

Finally, there is uncertainty regarding whether the United States will implement any climate-change policy, and if so, what the details will be of such a policy.

Adaptive Challenges Ahead for Energy Policy

What are the conflicts that have arisen out of these new realities? In Maryland, retail consumers emerging from rate freezes now face prices that are as much as 72 percent higher than earlier. The conflict has been over how to distribute the pain and the risk between the companies and consumers over time.²⁵ This issue is no different in a vertically integrated environment where, for example, residential customers of Florida Power & Light faced an almost 20 percent increase from rising natural-gas and petroleum prices.²⁶

In terms of new generation supply and technologies, conflicts involve the availability and reliability of clean-coal technologies, the ability of conservation to reduce future demand, and the nature and cost of environmental damage. Resolving these fact and distribution conflicts is critical to confronting the adaptive challenges of making tradeoffs between acceptable levels and sharing of risk, low energy prices, energy security, and the environment.²⁷

Siting and permitting processes for new infrastructure also lead to adaptive challenges. Some quality of life and environmental impacts are local, while the wider population enjoys the benefits of the facility.

Costs of Not Addressing the Challenges

In electricity and natural gas there are potentially large and immediate costs for failing to confront the adaptive questions. These costs may be seen in higher and more volatile energy prices than publicly acceptable because of the continued heavy reliance on natural gas as opposed to coal as a generating fuel. Continued avoidance of the underlying adaptive challenges associated with global climate change may risk greater environmental damage and lead to withholding investment until there is greater policy certainty.

The same holds true for the continued avoidance of authority conflicts, such as jurisdiction over siting and permitting power plants, and an apparent lack of clear authority over offshore drilling.

However, there is progress. EPACT clarified authority over the siting and permitting of LNG terminals and electricity transmission, and it redefined the federal/state relationship.²⁸ CAIR and CAMR have provided an answer to the environment/cost tradeoff with respect to sulfur dioxide, nitrogen

oxides, particulate matter, and mercury emissions.

If there is one lesson that should be taken from the history of utility regulation, it is that delaying adaptive challenges only compounds the problems. ■

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Endnotes

1. Speakers on these issues included FERC Commissioner Nora Brownell, Gulf Power President and CEO Susan Story, Irene Flannery of the Universal Service Administrative Co., former NARUC President Robert Rowe, Professor John Mayo of Georgetown University, Bob Gee of The Gee Strategies Group LLC, Allan Guyet of the Florida Department of Environmental Protection, Donald Santa Jr. of the Interstate Natural Gas Association of America, and J. Alan Beamon of the U.S. Department of Energy. Speaker presentations can be found at <http://www.purc.ufl.edu>. PURC is a research center at the University of Florida dedicated to providing policymakers, service providers, and stakeholders with the information and tools that they need to enhance the efficiency and effectiveness of utility services. PURC's annual conference brings together prominent researchers and practitioners to engage in a dialogue on current utility policy issues confronting Florida and the nation.
2. Lord, William B. (1979). "Conflict in Federal Water Resource Planning" *Water Resources Bulletin* 15(5): 1226-1235; and Shabman, Leonard (2005). "Water Supply Conflict and Government Response: The Challenge for Florida," *Askew Institute Report* Spring: 10-11.
3. Heifetz, Ronald A., and Marty Linsky. (2002). *Leadership on the Line: Staying Alive Through the Dangers of Leading*. Boston, MA: Harvard Business School Press, p. 12.
4. In certain situations stakeholders may be able to engage in transactions, such as logrolling, to mollify authority and value conflicts. However, such transactional approaches to resolving adaptive challenges only delay the adaptive work because shifts in the external environment will always disrupt the agreements.
5. The amount by which a company's costs must exceed the national average vary with company size, such that smaller companies receive more financial support than do larger companies. Furthermore, the amount of support depends on the extent to which the company's costs exceed the national average.
6. Irene Flannery, "USAC and the USF: Helping Keep Americans Connected," presentation at the PURC Annual Conference, February 2006.
7. Richard Gabel, *Development of Separations Principles in the Telephone Industry*, East Lansing, MI: Institute of Public Utilities, 1967, at 116.
8. Irene Flannery, February 2006.
9. John W. Mayo, "Reforming Universal Service," Presentation at the PURC Annual Conference, February 2006.
10. Access charges are the interconnection payments that long-distance providers pay to local telephone companies.
11. Robert Rowe, "Federal Universal Service," Presentation at the PURC Annual Conference, February 2006.
12. Robert Rowe, February 2006.

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(Cont. from p. 40)

13. Federal Communications Commission, 2005a. Universal Service Monitoring Report, CC Docket 98-202, 2005, Table 1.12.
14. The ratio of participating households to eligible households is one-third. However, in California, which accounts for approximately one-half of all Lifeline participating households, 36 percent more households participate in the program than are eligible. See Lynne Holt and Mark A. Jamison, "Making Telephone Service Affordable for Low-Income Households: An Analysis of Lifeline and Link-Up Telephone Programs in Florida," PURC working paper, University of Florida, 2006.
15. Lynne Holt and Mark A. Jamison, 2006.
16. Lynne Holt and Mark A. Jamison, 2006.
17. J. Alan Beamon, "Driving Forces Behind Generation Fuel Mix in the Annual Energy Outlook 2006," Presentation at the PURC Annual Conference, February 2006.
18. Donald F. Santa, "Natural Gas Regulation and Markets," Presentation at the PURC Annual Conference, February 2006 and Nora Brownell, "Energy Policy in the US: What We've Learned and Future Directions," Presentation at the PURC Annual Conference, February 2006.
19. Nora Brownell, February 2006.
20. Donald F. Santa, February 2006; and the *EIA Annual Energy Outlook 2006* at [http://www.eia.doe.gov/oiaf/aeo/pdf/0383\(2006\).pdf](http://www.eia.doe.gov/oiaf/aeo/pdf/0383(2006).pdf).
21. Donald F. Santa, February 2006.
22. Susan Story, "Securing our Energy Future," Presentation at the PURC Annual Conference, February 2006.
23. J. Alan Beamon, February 2006.
24. Nora Brownell, February 2006.
25. See Andrew A. Green, "BGE Rate Relief Promised," *Baltimore Sun*, April 12, 2006. Negotiations had been undertaken to smooth the rate increase over time and BG&E's parent, Constellation, was willing to take on some of the burden as well in exchange for approval of the proposed merger with FPL Group.
26. See http://www.fpl.com/rates/fuel_request.shtml for details on the rate increase. For industrial customers the rate increase was an even larger percentage at 41 percent.
27. This unresolved conflict is evidenced by the inability of the Bush administration and environmental and energy interest groups to come to any agreement on climate-change policy. Moreover, the conflict among cost, security, and environment, as well as a jurisdictional (authority) conflict, is also evident in the willingness of some states to consider opting out of the offshore drilling moratorium for natural gas, while other states remain steadfastly committed to it. See Donald F. Santa, February 2006, to see the potential gas reserves in the areas subject to the moratorium.
28. Robert W. Gee, "The Energy Policy Act of 2005: Redefining the Federal-State Relationship," Presentation at the PURC Annual Conference, February 2006.

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