

Defining the New Policy Conflicts

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

As we approach the 100th anniversary of regulation by public utility commissions in the United States, we are impressed by how much things have changed and how much they have stayed the same. What's changed? The technical challenges of ratemaking and creating regulatory agencies that dominated debates 100 years ago have been resolved and new issues have come to the forefront. What's stayed the same? Technical issues almost always present adaptive challenges -- challenges that require stakeholders to rethink traditions and practices that clash with new realities. For example, new realities in competitive telecommunications are forcing people to either give up traditional pricing and subsidies or face the prospect of some services and service providers disappearing. New energy and environmental policy realities, changing world energy markets, and growing demand are 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 will likely result in increased costs for the economy.

The difficulty of addressing these real-world challenges was the focus of the recent PURC Annual Conference "A Century of Utility Regulation: Lessons We've Learned." In this article we examine two issues that were prominent at the conference – universal service in telecommunications and building new electricity generating capacity – and the obstacles policymakers face in resolving these issues.¹ We begin by explaining the conflict analysis framework that we use to examine these controversial issues.

Conflict Analysis Framework

Utility policy is filled with conflict: Environmentalists and local communities are often 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 policy makers work through these conflicts? The first step is to discover the true natures of the conflicts using a conflict analysis framework based on the work of Lord (1979) and Shabman (2005). This framework identifies four types of conflict.² The first is conflict over facts: “What is?” Examples of fact conflicts would include, “How much of the future demand for electricity can be addressed by energy efficiency, conservation, and/or renewable resources?” or “What prices are customers willing and able to pay for telecommunications services?” Fact conflicts such as those posed above can be resolved through research and technical analysis.

Conflicts over the differential impacts of regulatory policies make up the second type of conflict, which we call interest or distribution conflicts. Consider for example the issue of hardening 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 will pay these costs? There is also the issue of where these system improvements will occur and when, which affects the distribution of benefits. Different voting blocks will have different views on these benefits and costs.

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,

which is 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 are conflicts over what should be and reflect preferences over, for example, the importance of energy prices and security versus environmental and health concerns. Authority conflicts, which are 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 (EPAct) 2005 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 about 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 address the actual conflict, which was over the trade-off between environmental concerns and the size of people's electricity bills, a debate the group feared it might lose. Work to resolve the false conflict over the study 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 delaying dialogue on another adaptive challenge facing the regulatory authority and stakeholders over how much risk is tolerable and who should bear that risk.

Below we apply this conflict framework to two topics addressed at the PURC Annual 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 of (Link-Up) 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 that has its 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 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 Company (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, i.e., the underlying values. These controversies relate primarily to the HCF and low-income programs.

The issues of who benefits and who pays make up the distribution issues. 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 of 1984 and 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's requirement that telephone subsidy systems be competitively neutral, the 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, however, 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 also 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 issues of who should receive high cost support, competition is creating 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 between 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 simultaneously achieve 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 policy makers 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. A key adaptive question for policy makers is: How important is allowing the FCC to 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 policy makers 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 pressure telephone companies to sign up more low-income households and have launched national and local marketing efforts. However, these initiatives beg the question: 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 policy makers 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 would likely involve a decrease of federal oversight because PURC research has shown that optimal program design varies across states.¹⁶

Meeting Energy Demand: The Promise of the Recent Past

Throughout the 1990's a major shift in thinking and policy had taken place in the electricity industry. Competition was to replace vertically integrated, regulated monopolies, end cost-of-service regulation for generation, improve efficiency, and lower consumer prices. Additionally, electricity generation going forward was going to be far cleaner than in the past, whether existing facilities were retired or retrofitted with the latest pollution abatement technologies, or whether new facilities would be 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 1970's and 1980's. To meet these policy demands, we observed during the last decade unprecedented additions of natural gas fired generating capacity of over 200 GWe.¹⁷

It seemed we could have our cake and eat it too. That is we could have low electricity prices and could 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 1970's. In short, it seemed as if two conflicts that were endemic to the industry, the cost/price versus environment conflict and the total level of acceptable risk and the burden of the risk conflicts, had been solved while the security of supply issue was simply 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 the promise of competition has been stymied by market power and manipulation, high fuel prices, and a lack of the necessary energy infrastructure in electricity transmission and natural gas pipelines, storage, and LNG facilities.¹⁸ Retail consumers are now facing the real price for power after having been shielded for several years under rate freezes in these markets. Finally, the electricity industry is just now recovering from the financial and structural meltdown of extended periods of high prices in the western markets, especially the California market, that have left multiple companies and consumers in its wake.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-\$7/mmBtu range.²⁰ Additionally, it is projected that the traditional natural gas

production basins will continue experiencing declining production and there will be a greater reliance on production from new regions as well as 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 the 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 base-load 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 have largely 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 to consumers.

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 will also include new LNG import facilities as well as new pipeline expansions to handle to 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 of such a policy will be.

Adaptive Challenges Ahead for Energy Policy

What are the conflicts that have arisen out of these new realities? In the case of retail consumers emerging from rate freezes to face prices that are as much as 72% higher than previously, such as in Maryland, the conflict has been over how to distribute the pain and the risk between the companies and consumers and over time.²⁵ This issue is also no different in a vertically integrated environment where, for example, residential customers of Florida Power & Light faced an almost 20% increase due to rising natural gas and petroleum prices.²⁶ In terms of new generation supply and technologies there are fact conflicts regarding 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 are critical to confronting the adaptive challenges of making trade-offs between acceptable levels and sharing of risk, low energy prices, energy security, and the environment.²⁷

Siting and permitting processes for new infrastructure also raise adaptive challenges. The conflicts usually take the form of, “Why can this be sited elsewhere?”

because some quality of life and environmental impacts are local while the wider population enjoys the benefits of the facility.

Moving Forward: The Cost of Not Addressing the Adaptive Challenges

In electricity and natural gas, there are potentially large and immediate costs in failing to confront the adaptive questions in value and authority. These costs may be seen in higher and more volatile energy prices than are publicly acceptable because we continue to rely to heavily on natural gas as a generating fuel as opposed to coal in the absence of decisions on these issues and we continue to withhold investment until there is greater policy certainty. We may face higher environmental costs than are politically or socially desired due to global climate change if we simply continue to avoid the underlying adaptive challenge. The same holds true for the continued avoidance of authority conflicts such as jurisdiction over siting and permitting power plants and with an apparent lack of clear authority over offshore drilling.

However, there is progress. EPAct 2005 clarified authority over the siting and permitting of LNG terminals and electricity transmission and in other spots has redefined the Federal-State relationship.²⁸ The recent Environmental Protection Agency rulemakings, The Clean Air Interstate Rule has (CAIR) and Clean Air Mercury Rule (CAMR) have provided an answer to a part of the environment, cost trade-off with respect to sulfur dioxide, nitrogen oxides, particulate matter, and mercury emissions.

Telecommunications provides a case-in-point for the cost of delay. The problems with high cost support were known before the 1984 breakup of AT&T, but addressing the problem was delayed so that now the problem has grown and compounded because of the

addition of new competitors. Concerns with the effectiveness of Lifeline were first raised in the late 1980s and technical “fixes” to the problems only increased the magnitudes of the issues.

A lesson learned from past 100 years is that delay in addressing adaptive challenges only compounds the problems.

¹ Speakers on these issues included FERC Commissioner Nora Brownell, Gulf Power President and CEO Susan Story, Irene Flannery of the Universal Service Administrative Company, 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 policy makers, 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 about 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.

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 their 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 between 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.