



## **Publications and Products Released and In Progress July 2008 – June 2009**

**Electricity—Gas—Telecommunications—Water—Multi-Utility**

*All completed documents are available at [www.nrri.org](http://www.nrri.org)*

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### ***Projects Released July 2008-November 15, 2008***

#### **Electricity**

##### ***Papers***

#### **A Rate Design to Encourage Energy Efficiency and Reduce Revenue Requirements *David Boonin, Report 08-08, July 2008***

Straight Fixed Variable (SFV) rate design is an overlooked method of decoupling a utility's income from sales. This report discusses the merits of SFV rate design together with Revenue-Neutral Energy Efficiency Feebates (REEF), which offer a complementary set of price signals designed to encourage customer conservation. The report can be found online at [http://nrri.org/pubs/electricity/rate\\_des\\_energy\\_eff\\_SVF\\_REEF\\_jul08--08.pdf](http://nrri.org/pubs/electricity/rate_des_energy_eff_SVF_REEF_jul08--08.pdf).

#### **The Electric Industry at a Glance**

***William Steinhurst, Ph.D., Senior Consultant, Synapse Energy Economics, November 2008***

This paper provides basic information on the U.S. electric industry. It assumes only a basic understanding of the nature and purpose of utility regulation. While it addresses issues related to ratemaking, it is not an introduction to rate setting. Section I reviews the overall nature

of the industry and of power production and use. Section II breaks down the industry into segments and discusses their recent and current status and organization. Section III covers regulatory jurisdiction, while Section IV identifies some of the critical issues facing the industry and its regulators. The report can be found online at [http://nrri.org/pubs/electricity/electricity\\_at\\_a\\_glance.pdf](http://nrri.org/pubs/electricity/electricity_at_a_glance.pdf).

### **Climate Change and State Utility Commissions: Pursuit of the Public Interest**

*Andrew Keeler, Ph.D., John Glenn School of Public Affairs, The Ohio State University*

Climate change poses a different challenge to the electricity sector in magnitude and nature than have traditional forms of environmental regulation. This essay lays out three distinct views of the public interest that commissions (and commissioners) could pursue in making decisions with respect to climate change policy and risks. This paper can be found online at [http://nrri2.org/index.php?option=com\\_content&task=view&id=138&Itemid=48](http://nrri2.org/index.php?option=com_content&task=view&id=138&Itemid=48).

### ***Presentations***

#### **Revenue-neutral Energy Efficiency Feebates**

*David M. Boonin, Public Utilities Commission of Ohio, September 17, 2008*

A workshop for the entire Ohio Public Utilities Commission discussing the concept of Revenue-neutral Energy Efficiency Feebates, under the assumption that a straight-fixed variable rate design was used. Personnel from the commission, local utilities, the consumer advocates' office, and environmental groups also participated in the workshop.

#### **Fundamentals of Electricity Law**

*Scott Hempling, Silver Spring, MD, September 25-26, 2008*

#### **Electricity Law Topics**

*Scott Hempling, Montpelier, VT, October 13, 2008*

#### **The Federal-State Relationship in the Regulation of the Electricity Industry: Current Challenges 2008**

*Scott Hempling, Indianapolis, IN, October 16-17, 2008*

#### **Allowed Return on Equity: Focus on Effective Regulation**

*David M. Boonin, NARUC Electricity Staff Subcommittee, November 2008*

A presentation prepared at the request of NARUC's Electricity Staff Subcommittee on issues to consider in determining the allowed return on equity. The presentation raises cautions about looking at other allowed returns and other shortcuts, and stresses the importance of setting a return based upon capital needs, as well as providing incentives for effective management.

## **Natural Gas**

### *Papers*

#### **Speculation in the Natural Gas Market: What It Is and What It Isn't; When It's Good and When It's Bad**

***Ken Costello, Report 08-11, November 2008***

Addresses basic questions about speculation in commodity markets, especially the natural gas and oil markets. Policymakers, analysts, and other market observers have expressed opinions on what effect increased speculation has had on commodity markets. These opinions diverge with different implications for appropriate public policy and other actions the federal government might take. The report can be found online at [http://nrri.org/pubs/gas/speculation\\_gas\\_nov08-11.pdf](http://nrri.org/pubs/gas/speculation_gas_nov08-11.pdf).

#### **The 2008 Natural Gas Information Toolkit**

***Ken Costello, project coordinator (for the NARUC Staff Subcommittee on Gas), September 2008***

The document provides state commissions with options to consider that may help mitigate the effects of high natural gas prices on retail gas consumers for the current winter season, as well as for subsequent winters. This document can be found online on the NARUC website at <http://www.naruc.org/Publications/gas%20toolkit%20final.pdf>.

### *Presentations*

#### **Key Natural Gas Issues Facing State Commissions and Gas Utilities**

***Ken Costello, NARUC Staff Subcommittee on Gas, July 20, 2008***

Discussed the major natural gas issues confronting state commissions, including ratemaking, gas affordability to low-income households, and the future price and availability of natural gas.

#### **Regulatory Oversight of Gas Supply Planning and Utility Performance**

***Ken Costello, NARUC Committee on Gas, July 22, 2008***

Highlighted the NRRI report (08-07) on the regulatory oversight of gas supply planning and utility performance.

**Questions to Ask about Outsourcing for Gas Procurement and Asset Management**  
*Ken Costello, NASUCA Gas Committee, October 14, 2008*

Introduced outsourcing as a business strategy and then discussed how gas utilities recently have used outsourcing for gas procurement and asset management. Identified questions state commissions should ask gas utilities about their outsourcing proposals.

**The Ratemaking Challenge: Making Decisions That Best Advance the Public Interest**  
*Ken Costello, Center for Public Utilities, October 16, 2008*

Discussed the pros and cons of ratemaking mechanisms, applying revenue decoupling as a case study. The focus was on how revenue decoupling affects different regulatory objectives.

**Gas Supply Planning and Procurement: A Comprehensive Approach for State Commissions**  
*Ken Costello, Center for Public Utilities, October 16, 2008*

Discussed a six-step regulatory approach for overseeing gas supply planning and utility procurement performance. Issues discussed included: (1) the role of a commission in utility hedging and other elements of utility planning, (2) the early involvement of a commission and non-utility stakeholders in utility planning, and (3) the establishment of commission principles and standards for utility planning.

**Key Issues Facing Gas Utilities and State Public Utility Commissions**  
*Ken Costello, Center for Public Utilities, October 17, 2008*

Discussed the implications of a tight wholesale natural gas market for gas utilities and state regulation; identified and examined new ratemaking mechanisms proposed by gas utilities; discussed gas affordability issues and utility responses; and discussed short- and long-term projections of the natural gas market.

**Gas Supply Planning and Procurement: A Comprehensive Regulatory Approach (teleseminar)**  
*Ken Costello, October 21, 2008*

Discussed a recent NRRI report (08-07) with the same title. The discussion, led by Ken Costello of NRRI, featured the major steps in comprehensive regulatory oversight. A panel of three persons from different perspectives provided comments on Mr. Costello's presentation as well as on the topic of gas supply planning and procurement.

**The NRRI's 2008 Activities on Natural Gas**  
*Ken Costello, New Mexico Public Regulation Commission, October 31, 2008*

Discussed the different NRRI activities on natural gas, highlighting the major conclusions of research projects.

## **Telecommunications**

### *Papers*

#### **Fundamentals of Telecommunications Regulation: Markets, Jurisdiction, and Challenges**

*Peter Bluhm, Report 08-10, October 7, 2008*

Assisting all newcomers to telecommunications regulation, the report broadly describes the components of the telecommunications industry and the methods by which it has been regulated. It describes four major challenges facing the industry and state regulators as well as existing universal service policies and mechanisms. This report has been reissued and updated from a May 2008 version. The paper can be found online at [http://nrri2.org/pubs/telecommunications/telecom\\_reg\\_fundamentals\\_08-10.pdf](http://nrri2.org/pubs/telecommunications/telecom_reg_fundamentals_08-10.pdf)

### *Presentations*

#### **Competitive Implications of Forbearance Petitions and the Special Access Debate**

*Peter Bluhm, NARUC Staff Subcommittee on Accounting and Finance, Lexington, KY, October 14, 2008*

This presentation reviewed the four major ways in which the FCC has used its forbearance powers, with special emphasis on forbearance from cost assignment regulations and forbearance from ARMIS service quality reporting. The presentation also lists related state policy issues arising from these federal actions. Finally, the presentation reviews the progress of the pending special access project.

#### **Traditional Regulatory Models and a VoIP World**

*Peter Bluhm, NARUC Staff Subcommittee on Accounting and Finance, Lexington, KY, October 14, 2008*

This presentation reviewed the differences between VoIP technology and classical switched technology as well as some FCC decisions that preempt certain portions of state jurisdiction over VoIP services. The presentation argues that current telecommunications statutes contain distinctions that are difficult or impossible to apply sensibly to modern telecommunications. The presentation also discusses how the changing nature of state regulation is changing the information and staffing needs of state commissions.

### *Assistance*

#### **Federal-State Joint Board on Separations**

*Peter Bluhm, July 2008 – September 2008*

Separations factors have been frozen since 2001, and the freeze will expire in 2009. The Separations Joint Board is considering whether the freeze should be extended, modified, or abolished. NRRI provided analysis and written products to assist in the deliberations of the state members of the Joint Board.

## Water

### **Certification Requirements as a Path to Improve Small Water Utility Operations: Options for Implementation**

*David Denig-Chakroff, November 2008*

Regulating struggling small water utilities is a special challenge for state commissions. The utilities' financial, managerial, and technical deficiencies make it difficult for commissions to induce effective, efficient operations, reasonable rates, and high standards of customer service.

NRRI published a paper in July 2008 presenting the issues and challenges faced by regulatory commissions in establishing and incorporating performance standards into certification requirements. The paper also addressed the question of how commissions could ensure continuous high performance from small water utilities once they receive certification. This paper can be found online at [http://nrri.org/pubs/water/small\\_util\\_cert\\_issues\\_jul08-09.pdf](http://nrri.org/pubs/water/small_util_cert_issues_jul08-09.pdf).

This paper provides regulatory commissions with specific ideas, options, and tools they can use to improve small water utility operations through certification requirements, including performance standards, performance measures, and models for statutory language, rules, guidelines, and practices.

## Multi-Utility

### *Papers*

### **Pre-Approval Commitments: When And Under What Conditions Should Regulators Commit Ratepayer Dollars to Utility-Proposed Capital Projects?**

*Scott Hempling and Scott H. Strauss, November 2008*

When faced with a request for approval of a project-related regulatory commitment in advance of project completion, a commission will face several basic questions: 1) What types of regulatory commitments should be considered?; 2) At what point in the construction process should the regulator make a commitment to a new capital project?; and 3) Assuming the commitment involves cost recovery, should the commitment be bounded through the imposition of conditions, and, if so, how should those conditions be structured?

Consideration of advance commitments requires that the commission determine the terms on which risks may be shifted between a utility's shareholders and its customers, and the benefits provided in response to any approved risk shifting. In answering the questions presented above, the regulator must weigh multiple, and occasionally conflicting, concerns, including those involving management effectiveness, regulatory effectiveness, and rates. This paper helps regulators identify and weigh these factors. It can be found online at [http://nrri.org/pubs/electricity/nrri\\_preapproval\\_commitments\\_08-12.pdf](http://nrri.org/pubs/electricity/nrri_preapproval_commitments_08-12.pdf).

## *Presentations*

**“Excessive Burden” or “Something More Than a Small Dent”? The Supreme Court Parses *Mobile-Sierra***  
*Scott Hempling, July 15, 2008*

Described the basics of *Mobile-Sierra*, market pricing, and their intersection, then probed the gaps and ambiguities in the Court’s opinion. Addressing the question “What next?” was a panel of practitioners from the seller, buyer, and state regulatory communities: Mark Sidran, Chairman, Washington Utilities and Transportation Commission; Eric Christensen, Assistant General Counsel, Snohomish Public Utility District No. 1; and John Shelk, Executive Director, Electric Power Supply Association. The seminar materials can be found online at [http://nrri.org/pubs/electricity/nrri\\_mobile\\_sierra\\_lecture\\_7-08.pdf](http://nrri.org/pubs/electricity/nrri_mobile_sierra_lecture_7-08.pdf).

## *Executive Director’s Monthly Essays*

**The Effective Regulator Part I: Purposefulness**  
*October 2007*

**The Effective Regulator Part II: Education**  
*November 2007*

**The Effective Regulator Part III: Decisiveness**  
*December 2007*

**The Effective Regulator Part IV: Independence**  
*January 2008*

**Commissions are Not Courts; Regulators are not Judges**  
*February 2008*

**Legislatures and Commissions: How Well Do They Work Together?**  
*March 2008*

**Competition “vs.” Regulation: Have We Achieved Conversational Clarity?**  
*April 2008*

**Competition “vs.” Regulation: Three of the Most Commonly Used Phrases**  
*May 2008*

**“Politics”: How Do Regulators Respond?**  
*June 2008*

**“Politics”: Diminishing the Distortions of Private Interest Politics**  
*July 2008*

**Regulatory “Settlements”: When do Private Agreements Serve the Public Interest?**  
*August 2008*

**Essential to Effectiveness: Community Acceptance of Regulation’s Mission**  
*September 2008*

**Regulatory Resources: Does the Differential Make a Difference?**  
*October 2008*

## ***Upcoming Projects, November 16, 2008 – June 30, 2009***

### **Natural Gas**

#### ***Papers***

#### **Outsourcing of Gas Procurement and Asset Management**

***Ken Costello***

This project will expand on a paper written in June 2008 to the Colorado Public Utilities Commission by analyzing in more detail the major issues associated with outsourcing. These issues include: (1) the rationale for outsourcing, (2) affiliate relationships, (3) fees paid to a utility, (4) the sharing of benefits, and (5) the selection of the outsourcing firm.

#### **Fuel Switching from Electricity to Natural Gas for End-Use Applications**

***Ken Costello***

This project will provide an objective analysis of the effects of fuel switching, and identify and examine regulatory options that would promote switching if warranted by empirical evidence. The paper will address the following questions: (1) What have studies said about the effects of fuel switching on the environment, energy use, and energy costs?; (2) Should state commissions evaluate fuel switching as an option in integrated resource planning?; and (3) Should a state commission establish a policy on fuel switching?

#### **Case Studies of Financial Hedging: Traits of Good Programs**

***Ken Costello***

This project will provide evidence identifying common features of hedging strategies producing desirable results. Identifying such features can assist state commissions in evaluating proposed and existing hedging strategies by gas utilities. This paper will address two major questions: (1) What features of hedging programs have produced desirable results?; and (2) What major lessons can state commissions draw from the case-study programs in implementing hedging programs for other gas utilities?

### **Telecommunications**

#### **Competitive Aspects of Special Access Services**

***Peter Bluhm***

This study began in April 2008 with special funding from NARUC. The project is analyzing confidential data collected in 2007 by a NARUC study group, as well as data collected in 2008 by NRRI. NRRI has engaged Dr. Robert Loube to assist in analyzing the study group data and preparing the final report.

#### **Carriers of Last Resort: An Opportunity for State Commissions**

***Peter Bluhm***

This report will examine state commission policies regarding expectations of, and compensation for, carriers of last resort. The legal concept of COLR can serve as a platform to resolve complex issues about providing competitive choice in some areas and ensuring the continuation of universal service in others. The report will also suggest methods of clarifying state COLR policies.

**Pole Attachments**

***Peter Bluhm***

This report will provide a reference for the approximately 20 state commissions that regulate pole attachments directly. The report will: review developments at the FCC; summarize interactions between pole owners and attachers; summarize state policies regarding pole attachments; and identify any best practices.

**Interconnection Agreements and Arbitrations**

***Peter Bluhm***

Interconnection agreements are formed by carriers that physically connect their networks. The NRRI report will be a reference for state commissions when conducting arbitrations, particularly on new technology issues, such as conversion to packet formats. It will review the legal background of interconnection agreements and arbitrations, review common industry practices regarding interconnection, and evaluate whether new regulatory standards are needed for newer technologies.

**Universal Service – Best State Practices**

***Peter Bluhm***

The NRRI report will summarize the results of a survey of state high-cost USF programs in six to twelve states. For each, the report will describe: the principal purpose; reliance on cost models and support models; interactions with rate designs; support eligibility rules; collection mechanisms; and accountability measures. The report will identify any best practices that become apparent during the research.

**Water**

**The Effectiveness of Variable Frequency Drive Pumps in Reducing Electricity Used in Water Production**

***David Denig-Chakroff***

NRRI published a report in June 2008 to help regulators develop policies to induce water utilities to reduce electricity use. About 4 percent of electricity use in the United States is attributable to the supply, conveyance and treatment of water and wastewater. Pumping accounts for between 90 percent and 99 percent of electricity use at water utilities. The report found that

increasing pumping efficiency by installing variable frequency drives on pumps was one way to reduce electricity use. It recommended that regulatory commissions encourage electric utilities to offer and water utilities to participate in energy efficiency programs. Many water utilities have installed variable frequency drives on pumps to improve pumping efficiency. For this study, NRRI will work with the University of Wisconsin, Department of Civil and Environmental Engineering to determine the effectiveness of variable frequency drives in reducing power consumption at water utilities that have installed them. It will provide commissions with valuable information when evaluating energy efficiency programs proposed by water and electric utilities.

## **Revenue Decoupling for Water Utilities**

*David Denig-Chakroff*

Water conservation is becoming increasingly important as a means of sustaining natural resources. It is likely to become even more critical as we face the effects of global climate change. Some water utilities have been reluctant to encourage water conservation measures due to concerns that reduced sales and revenues would jeopardize their financial stability. Commissions have addressed this concern for some gas and electric companies by authorizing revenue decoupling, a mechanism that adjusts rates and revenues when sales deviate from a predetermined target level. This paper will evaluate the potential effect of revenue decoupling for water utilities on water conservation efforts. It will discuss potential advantages and disadvantages to utilities and consumers and formulate questions regulatory commissions can ask their regulated utilities to determine whether decoupling would be an effective mechanism.

## **Replacing Aging Water Infrastructure: The Challenges Facing Regulatory Commissions**

*David Denig-Chakroff*

In the years immediately following World War II, there was unprecedented industrial, business, commercial, and residential development in the U.S., including the water and wastewater infrastructure to support that development. The water and wastewater facilities developed during that period are now reaching the age when they are beginning to wear out and need to be upgraded or replaced. Without such upgrades and replacements, communities risk adverse economic consequences, such as unplanned system failures, increased maintenance costs, and unbudgeted repair and replacement costs. Surveys conducted by EPA suggest that the need for water and wastewater infrastructure improvement and replacement (both privately and publicly owned) over the next 20 years is between \$500 billion and \$1 trillion.

A number of challenges face utilities and regulatory commissions, including financing the necessary infrastructure replacements such that (a) rates increase gradually (as opposed to sudden spikes in rates), while (b) maintaining the utilities' financial stability. A second challenge is ensuring that the large expenditures are made prudently, so as to win and sustain customer trust and political credibility. Adding to the challenge is the absence, for most utilities, of a designated fund available to replace aging infrastructure—an absence attributable to ratemaking practices that have kept depreciation rates low and have disallowed or discouraged rate recovery of contributions in aid of construction.

This report will analyze the issues and criteria commissions should consider when making decisions about replacing aging water infrastructure. It will also analyze procedural,

regulatory, and staffing needs commissions will face in responding to these challenges and avoiding similar situations in the future.

### **Designing Policies to Encourage Efficient Acquisitions, Consolidations and Regionalization of Substandard Water Systems**

*David Denig-Chakroff*

Despite regulatory efforts to improve conditions for small and struggling water utilities, some may not be able to achieve efficient operations or provide acceptable standards of customer service at reasonable rates. This project would investigate possible inducements for mergers and acquisition of failing and substandard systems. It would investigate whether commissions should approve the acquisition of a failing system at a purchase price exceeding book value and allow the acquirer to recover the acquisition premium from ratepayers. The project would evaluate takeover regulations and other commission policies that promote acquisition of substandard systems and report on their success and lessons learned.

### **Electricity Reduction Potential through Water Demand-side Management**

*David Denig-Chakroff*

About 4 percent of electricity use in the United States is attributable to the supply, conveyance, and treatment of water and wastewater. Thus, reducing water use through demand-side management also results in reducing electricity use. Water conservation programs have become commonplace across the country, with varying degrees of success. Some policymakers, utility managers, and consumers question the economy of such programs based on their costs and benefits. Many, however, do not factor in the benefits of reducing electricity use when analyzing water conservation programs. This report will investigate the potential benefits of reducing electricity use through water demand-side management. It will formulate questions regulatory commissions can ask of their regulated utilities to seek a better understanding of the potential energy conservation aspects of water conservation programs.