

Russell Feingold

Mr. Feingold is an experienced, officer-level management consultant with a broad range of project and managerial experience involving gas, electric, and water utilities. Specializing in the energy and utilities industries, he has advised energy clients pertaining to costing and pricing, competitive market analysis, rate case and regulatory planning and policy development, innovative ratemaking concepts, gas supply planning and procurement issues, strategic business planning, merger and acquisition analysis, regulatory due diligence, corporate restructuring, new product and service development, load research and demand forecasting studies, and market planning. He has prepared and presented expert testimony submitted to the FERC, and several state and provincial regulatory commissions dealing with the costing, pricing, and marketing of gas and electric utility services.

PROJECT EXPERIENCE

Utility Ratemaking and Regulatory Policy Analysis

Mr. Feingold is a nationally recognized expert in all elements of utility costing, pricing and regulatory requirements. He has participated in numerous projects for gas and electric utilities and has extensive experience in a broad range of utility ratemaking issues, including:

- Fully allocated and marginal cost studies;
- Rate design, strategic and market-based pricing;
- Service and rate unbundling;
- Innovative rates for distributed generation (DG) customers
- Revenue sharing;
- Revenue decoupling, weather normalization and other automatic adjustment rate mechanisms;
- Infrastructure cost recovery mechanisms;
- Incentive ratemaking and Performance-Based Regulation (PBR); and
- End-user bypass and energy regulation analysis.

He has worked closely with a number of gas and electric utilities to develop the conceptual underpinnings, regulatory evidence and related filings, and has provided expert testimonial support for the implementation of various automatic adjustment rate mechanisms to address variability of energy sales (revenue decoupling) and the timely recovery of costs associated with infrastructure replacement, uncollectible accounts expense and energy efficiency and conservation programs for utility end-use customers.

He has assisted clients in the evaluation and development of PBR approaches to replace traditional cost-based regulation. In particular, he has worked with:

- A combination utility to develop gas and electric price cap mechanisms for its distribution businesses;

VICE PRESIDENT, RATE & REGULATORY SERVICES LEAD

Specialization:

Utility Ratemaking and Regulatory Policy Analysis, Utility Costing and Pricing, Rate Case Management, Competitive Market Analysis, Strategic Business Planning, Corporate Restructuring, New Product and Service Development, Energy Litigation Support, Expert Testimony

Education

- Polytechnic Institute of New York University, MS Financial Management, 1977.
- Washington University, St. Louis, BS Electrical Engineering, 1973.

Professional Associations

- American Gas Association, Financial Associate Member
- Member, State Affairs Committee of the American Gas Association
- Member, Energy Bar Association
- Member, Energy Bar Association Electricity and Natural Gas Regulation Committees
- Member, Institute of Electrical and Electronic Engineers

Year Career Started

1973

Year Started with B&V

2007

- A Canadian combination utility to provide strategic, developmental, and litigation support for the implementation of two PBR plans and the related performance indicators and targets.
- A Canadian gas utility to provide strategic and issue-oriented support for development and implementation of a “second generation” PBR plan;
- An Eastern gas utility to evaluate and develop a performance-based Purchased Gas Adjustment (PGA) mechanism;
- A Midwestern gas utility to develop performance-based gas procurement measures for use in conjunction with the filing of performance-based PGA mechanisms before state regulators; and
- A Midwestern electric utility to evaluate and develop a price cap mechanism to be applied to each of its classes of service.

For a Northeastern gas utility, Mr. Feingold directed an effort to develop the activity-based cost support for a wide range of unbundled services in conjunction with establishing a residential pilot program permitting all customers the opportunity to purchase all or any part of their energy requirements on a competitive basis from third-party suppliers.

Mr. Feingold was responsible for conducting an in-depth analysis of the current gas rates and services for a Midwestern gas utility. He developed an appropriate pricing structure for the utility’s unbundled gas transportation and storage services and assisted in establishing a longer-range pricing strategy for all utility services with support provided through the presentation of expert testimony. This assignment is typical of Mr. Feingold’s work in the utility rate design and analysis area.

Interstate Natural Gas Pipeline Ratemaking and Regulation

Mr. Feingold has worked on numerous ratemaking and regulatory projects on behalf of major natural gas shippers involving interstate natural gas pipeline companies regulated by the Federal Energy Regulatory Commission in the U.S. and the National Energy Board in Canada. These projects have addressed a wide variety of issues, including:

- Revenue requirements;
- Cost allocation methods
- Rate design and competitive pricing;
- Service and rate unbundling;
- Sales forecasting analyses;
- Revenue sharing methods;
- Fuel cost recovery and fuel tracker mechanisms; and
- Expert testimony and energy litigation support.

Competitive Market Assessment

In conjunction with the deregulation of the gas and electric utility industries, Mr. Feingold has assisted utilities with the evaluation and development of new energy-related products and services. These assignments typically include an assessment of competitors and the strategic opportunities and threats posed by future market conditions, an assessment of customer needs, development of high-level product and service strategies, development of prototype products and services, an evaluation of their expected financial performance, preparation of market rollout strategies and a specification of the corporate infrastructure requirements associated with their market rollout.

Mr. Feingold has assisted numerous gas and electric utilities in North America to design and implement retail customer choice programs. His work has focused on the following topical areas: reviews of industry trends and successful choice programs, cost of service study and revenue requirements, rate and service concept development, analysis of demand forecasting methodologies, analysis of financial impacts of customer choice, customer relationship strategy development, organization design support, and expert testimony and witness preparation.

On behalf of an unregulated energy marketing affiliate, Mr. Feingold directed a project to assess the claims made by the U.S. Department of Justice that the marketing affiliate violated antitrust laws. Specifically, the claims focused on the impact that the company's formation had on competition related to secondary capacity rights on interstate natural gas pipelines and whether there was any attempt to monopolize that capacity.

Within the broader context of the North American gas commodity and pipeline transportation markets, a detailed market power assessment was conducted that evaluated the pipeline capacity held by the marketer relative to the capacity held by other competing shippers on the pipeline. Based on his analysis, it was concluded that the energy marketer was not in a position to exercise any level of market power under any economic or legal standard.

On behalf of a major New England combination utility, Mr. Feingold directed a project to conduct a competitive assessment of various unbundled services, including customer billing, call center operations, meter services, meter reading, street lighting, and distribution service (both gas and electric functions). The work consisted of the following activities:

- Identify the services provided by gas and electric distribution companies;
- Identify the actual costs of providing these services;
- Benchmark the utility's performance against other companies;
- Identify current and future competitors for each service; and
- Formulate a business plan for each service.

Mr. Feingold has directed or participated in various projects related to market analysis and demand forecasting, as well as the functional area of marketing. As part of broader pricing-related projects, he has reviewed and assisted in the development of the marketing strategies, plans and programs of many local distribution companies. These projects have included market research and segmentation analysis, market forecasting, load research and customer focus group evaluations. Mr. Feingold's clients in this area have included numerous Midwestern and Northeastern gas and electric utilities.

For a Southern gas utility, Mr. Feingold performed a strategic and operational assessment of its marketing, pricing and gas supply operations, as well as emerging opportunities in the natural gas and electric power marketing industries.

Mr. Feingold participated in a project for a Midwestern gas utility to develop comprehensive integrated least-cost plans for filing before its state regulatory commission. This project dealt with all aspects of integrated resource planning, including gas supply-side planning and strategies, DSM program screening, development and implementation, evaluation of cost recovery mechanisms, supply- and demand-side integration activities, and regulatory presentation and acceptance. Other gas utilities for which similar services were provided include a Midwestern gas utility, a Southern gas utility and an Eastern gas utility.

Mergers, Acquisition, and Corporate Restructuring

Mr. Feingold served as the overall Project Officer for a long-term assignment with Detroit Edison Company, Michigan Consolidated Gas Company (MCN) and the Federal Trade Commission (FTC) in conjunction with Detroit Edison's acquisition of MCN. Specifically, he served as the Auditor of a 20-year Easement Agreement (for gas distribution assets) between MCN and Exelon Energy to implement a competitive remedy required by the FTC, as a pre-condition of the merger, pertaining to the supply of natural gas to any electric displacement loads in the merged utility service territories.

Mr. Feingold served as Project Manager in providing assistance to an Eastern utility holding corporation during its proposed acquisition of an Eastern gas and water utility. His responsibilities included the identification of the potential savings that would result from the acquisition, the development of an inter-jurisdictional gas cost allocation methodology and related assistance dealing with obtaining the necessary regulatory approval of the acquisition.

On behalf of Indiana Gas Company (Vectren Energy) and Citizens Gas & Coke Utility, he provided strategic and litigation support in conjunction with their formation of an unregulated gas merchant/marketing company (ProLiance Energy, LLC). His responsibilities included:

- Assessment of the strategic and economic benefits of the new company from the perspective of the LDCs' ratepayers;

- Evaluation of how formation of the proposed company was an appropriate response to the changes that have occurred within the natural gas industry; and
- Evaluation of a number of market power-related issues pertaining to the formation.

Mr. Feingold filed expert testimony before the state regulatory body concerning the results of his efforts.

On behalf of a Union Gas Limited (Westcoast Energy/Duke Energy), Mr. Feingold directed a project to organizationally separate the utility's Energy Solutions Business from its Gas Delivery Business. Specifically, the project team conducted the following tasks:

- Researched and established the client's business and cost separation principles;
- Developed computer modeling capabilities to conduct the underlying cost separation analysis;
- Conducted the cost separation study;
- Assisted in the restructuring of the client's shared corporate services;
- Assisted in the establishment of transfer pricing principles for use in setting prices of shared services between the two businesses;
- Advised the client's executive group on business separation strategies and issues; and
- Prepared and supported expert evidence before the client's regulatory body.

Mr. Feingold was responsible for an assignment with a major Midwestern gas utility to evaluate a potential acquisition of specific transmission assets, gas production contracts and related gathering facilities from another company. His responsibilities included conducting an economic and non-economic evaluation of the potential acquisition, assessing the impact of the acquisition from an operating, financial and regulatory perspective and identifying the key risks related to the acquisition.

On behalf of a Southern gas utility, Mr. Feingold participated in the restructuring of an existing corporate organization into gas distribution (intrastate) and gas pipeline (interstate) operating divisions. He assisted in the operational, regulatory, legal, financial, and accounting analyses that developed financial, gas supply and market forecasts necessary to determine the effects of the reorganization.

Mr. Feingold has actively participated in numerous regulatory due diligence projects to evaluate the regulatory policies, processes, and procedures applicable to the gas and electric utility operations of the target utility company.

Gas Supply Planning and Procurement

Mr. Feingold has conducted numerous studies related to gas supply procurement and planning for local distribution companies and combination utilities. These studies have analyzed a wide range of issues, including the availability and cost of future supplies; evaluation of alternate gas supply and deliverability resources; gas supply planning, procurement and management processes of a utility; supply reliability and peak day/winter season capacity levels; and the appropriateness of a capacity reserve margin.

Additionally, he has been involved in gas supply modeling activities related to least-cost planning and the evaluation of transportation project alternatives. Mr. Feingold has provided these services to various local distribution companies, including three Midwestern gas utilities, a Western gas and electric utility, a Southern gas utility, a Midwestern gas and electric utility, an Eastern gas and electric utility and a Midwestern gas utility.

Mr. Feingold worked with numerous gas distribution utilities to analyze and support through expert testimony their design day demand and capacity requirements before utility regulators. These included South Jersey Gas Company, Equitable Gas Company, Dominion Peoples and Dominion East Ohio and PG Energy.

On behalf of the Gas Research Institute (GRI), Mr. Feingold directed a comprehensive study to evaluate the future role of peak-shaving in gas utility operations. The objective of the study was to:

- Evaluate the role of peak-shaving supplies in relation to storage and deliverability within the larger context of the evolving demand profile in the natural gas industry;
- Determine peak-shaving costs;
- Summarize trends in utility decision practices that influence the value of peak-shaving supplies;
- Assess the opportunity to realize synergies with utility peak-shaving and new-end uses, such as power generation and transportation;
- Project future demand for peak-shaving supplies; and
- Isolate any issues or barriers to increasing the benefit of utilization of peak-shaving supplies and identify any R&D opportunities.

Mr. Feingold has also advised electric utility clients on the procurement of gas supply and interstate capacity resources for use in electric generation, including Nevada Power Company and an Eastern combination utility.

Operational and Transactional Reviews

On behalf of a Canadian gas utility, Mr. Feingold was responsible for establishing the original organizational framework and structure for the utility's rate and

regulatory activities. He identified and specified database requirements; manpower and work experience requirements, established job descriptions, and delineated the appropriate manner in which the department's activities should interface with other corporate activities within the company.

On behalf of one of the largest integrated gas companies, Mr. Feingold directed a comprehensive review of inter-company transactions and relationships among its affiliate organizations. His responsibilities included examining the appropriateness of its affiliate transaction process and evaluating how reasonable the level of affiliate charges incurred were by each of the LDC affiliates and conducting a comparative assessment of its affiliate transactions through benchmarking against the transactions of similarly-situated gas utilities.

Mr. Feingold led a project team on an assignment for a major mid-Atlantic gas utility to review and analyze the lost and unaccounted for (LUF) gas levels experienced historically on its gas system. The effort required the team to review, analyze and validate the data and procedures used by the utility to reconcile and account for the gas received into its gas system and the gas delivered to its customers. Both accounting and operational issues were considered in the project, and a comprehensive structural process was developed for monitoring and evaluating LUF internally on an ongoing basis.

Mr. Feingold served as Project Manager on an assignment for a Southern gas utility to evaluate its accounting procedures and business systems for transportation service. In addition, Mr. Feingold was responsible for conducting a detailed review to identify improvements in the Company's practices and methods for managing lost and unaccounted-for gas levels.

For a Northeastern gas utility, Mr. Feingold performed a complete financial review, with analysis and recommendations, dealing with financial and sales forecasting methods, revenue instability problems and return on investment.

Mr. Feingold has participated in various gas utility-related projects involving the specification of user requirements, conceptual system design, and the testing and evaluation of software systems, which were both mainframe and PC-based. Specifically, these systems related to costing and rate design, gas transportation measurement, billing and accounting, revenue forecasting, gas supply planning and dispatching, marketing information systems and regulatory filing requirements.

His clients have included an Eastern utility holding company, two Southern gas utilities, numerous Eastern gas utilities, a Southern gas utility and a major Midwestern gas utility.

Mr. Feingold has also performed analyses of utility energy costs, energy consumption and demand levels, utility power contracts and plant operations to

develop energy use and cost-minimizing strategies for several large industrial customers.

International Energy Assignments

Besides his extensive work experience in Canada, Mr. Feingold has participated in numerous international energy-related assignments. On behalf of the largest gas utility in Australia, Mr. Feingold addressed a wide range of costing, pricing, regulatory, competitive, organizational and transactional issues pertaining to gas deregulation and open-access transport services for the gas industry in Australia.

On behalf of a major Asian electric utility, Mr. Feingold conducted a comprehensive study of the tariff reform strategies and plans required to prepare an electric utility for full energy deregulation. Work included review of tariff reform issues resulting from restructuring of the electric utilities in six selected countries and development of implications and recommendations for guiding changes to the utility's operating, financial, and market situation.

On behalf of an international gas corporation, Mr. Feingold reviewed and evaluated possible changes in the regulation of liquefied petroleum (LP) gas companies that were proposed by an International Energy Agency.

For an international electric utility, Mr. Feingold performed energy audits of selected commercial and industrial electric users and evaluated the country's potential energy conservation levels over forecasted five- and 10-year periods.

Mr. Feingold assisted an international gas utility in understanding U.S. gas regulatory policies, procedures and programs as part of the ongoing efforts to privatize the gas industry in that country.

On behalf of a government-owned gas manufacturing plant and associated gas distribution system located in Montevideo, Uruguay, Mr. Feingold conducted a rate structure analysis on a cost of service basis to evaluate the rate levels necessary to recover the facility's capital investment; operation and maintenance expenses and a fair return on investment over the 15-year lease term; and on a market or value of service basis, to evaluate the level of gas prices supportable relative to other competitive fuel sources.

Expert Testimony and Litigation Support

As an integral part of the services provided to clients in the above-discussed areas, Mr. Feingold has frequently prepared and presented expert testimony in support of his consulting activities. This testimony has been presented before the FERC and numerous state and provincial regulatory commissions.

Specifically, Mr. Feingold's expert testimony has dealt with the costing and pricing of energy-related products and services for gas and electric distribution and gas pipeline companies.

In addition to traditional utility costing and rate design concepts and issues, his expert testimony has addressed gas transportation rates, gas supply planning issues and activities, market-based rates, PBR concepts and plans, competitive market analysis, gas merchant service issues, strategic business alliances, market power assessment, merger and acquisition analyses, multi-jurisdictional utility cost allocation issues, inter-affiliate cost separation and transfer pricing issues, seasonal rates, cogeneration rates and pipeline ratemaking issues related to the importation of gas into the United States.

Finally, Mr. Feingold has extensive experience in providing other litigation support activities related to the development and preparation of interrogatories, cross-examination of expert witnesses and the technical aspects of legal briefs.

Mr. Feingold has presented expert testimony before the following regulatory bodies:

- Federal Energy Regulatory Commission
- National Energy Board of Canada
- Arkansas Public Service Commission
- British Columbia Utilities Commission (Canada)
- California Public Utilities Commission
- Connecticut Department of Public Utility Control
- Delaware Public Service Commission
- Georgia Public Service Commission
- Illinois Commerce Commission
- Indiana Utility Regulatory Commission
- Iowa Utilities Board
- Kentucky Public Service Commission
- Manitoba Public Utilities Board (Canada)
- Massachusetts Department of Public Utilities
- Michigan Public Service Commission
- Minnesota Public Utilities Commission
- Missouri Public Service Commission
- Montana Public Service Commission
- Nebraska Public Service Commission
- New Hampshire Public Utilities Commission
- New Jersey Board of Public Utilities
- New Mexico Public Regulation Commission
- New York Public Service Commission
- North Carolina Utilities Commission
- North Dakota Public Service Commission
- Public Utilities Commission of Ohio
- Oklahoma Corporation Commission
- Ontario Energy Board (Canada)
- Oregon Public Utility Commission
- Pennsylvania Public Utility Commission

- Philadelphia Gas Commission
- Régie de l'Énergie Quebec (Canada)
- South Dakota Public Utilities Commission
- Tennessee Regulatory Authority
- Utah Public Service Commission
- Vermont Public Service Board
- Virginia State Corporation Commission
- Washington Utilities and Transportation Commission
- Wyoming Public Service Commission

PUBLICATIONS AND PRESENTATIONS

"The Valuing and Pricing of Distributed Energy Resources: Some Inconvenient Truths," SNL Energy Utility Regulation Conference, December 14-15, 2016.

"Pricing Concepts and Regulatory Issues for Distributed Energy Resources," American Gas Association, State Affairs Committee Meeting, October 9-12, 2016.

"State Regulatory Update – Regulatory Responses to a Changing Utility Industry," American Gas Association Financial Forum, May 15-17, 2016.

"State Regulatory Update: Regulatory Responses to a Changing Utility Industry" American Gas Association, Finance Committee Meeting, March 14-16, 2016.

"Rate Restructuring Tiers and Other Pricing Twists", SNL 2015 Utility Regulation Conference, December 10, 2015.

"Utility Ratemaking Solutions During a Time of Transition", American Gas Association, State Affairs Committee Meeting, October 4-7, 2015.

"Current Regulatory and Ratemaking Issues", American Gas Association, Accounting Principles Committee Meeting, August 17-19, 2015.

"Utility Ratemaking Solutions for a Changing Energy Marketplace", SNL Online Course, July 15, 2015 and October 27, 2015.

"State Regulatory and Legislative Issues", American Gas Association Financial Forum, May 17-19, 2015.

"Rate Design and Cost Allocation Issues", SNL 2014 Utility Regulation Conference, December 8-9, 2014.

"Current Regulatory and Ratemaking Issues", American Gas Association, Accounting Principles Committee Meeting, August 18-20, 2014.

"Regulatory Update", Southern Gas Association, 2014 Management Conference, Accounting & Financial Executives Roundtable, April 2-4, 2014.

"Emerging Regulatory Issues for Gas Distribution Companies," American Gas Association, Finance Committee Meeting, March 17-19, 2014.

"Balancing Rising Costs & Customer Expectations," co-authored with Will Williams and Jeff Evans, Western Energy Institute, WE Magazine, Winter 2013 issue.

"Current Trends in Utility Rates and Economic Regulation," Western Energy Institute, WE Magazine, Fall 2013 issue.

"Natural Gas Infrastructure and Electric Generation: Proposed Solutions for New England," American Gas Association, State Affairs Committee Meeting, October 6-9, 2013

"Utilities 2.0 Roundtable," 2013 National Town Meeting on Demand Response and Smart Grid, July 10-11, 2013

"State Regulatory and Legislative Issues," American Gas Association Financial Forum, May 5-7, 2013

"Providing Natural Gas to Unserved and Underserved Communities," American Gas Association Rate Committee Meeting and Regulatory Issues Seminar, October 28-31, 2012.

"State Regulatory Issues Affecting Gas Utilities," American Gas Association Accounting Principles Committee Meeting, August 13-15, 2012.

"State Regulatory Landscape and Future Trends Affecting Utilities," American Gas Association Financial Forum, May 6-8, 2012.

"The Continuing Saga of Fixed Cost Recovery: Arguments in Utility Rate Proceedings," American Gas Association Rate Committee Meeting and Regulatory Issues Seminar, August 28-31, 2011.

"State Regulatory Issues Affecting Utilities," American Gas Association Accounting Principles Committee Meeting, August 15-17, 2011.

"State Regulatory Issues Affecting Utilities," Edison Electric Institute/American Gas Association Accounting Leadership Conference, June 26-29, 2011.

"State Regulatory and Legislative Issues Affecting Utilities," American Gas Association Financial Forum, May 15-17, 2011.

"2011 Forecast – Regulatory Issues and Risks for Utilities," American Gas Association Finance Committee Meeting, March 16-18, 2011.

"State Regulatory and Legislative Issues Affecting Utilities," American Gas Association Financial Forum, May 17-19, 2010.

"A Utility's Regulatory Compact: Where's the Right Balance?" - RMEL Electric Energy Magazine, Issue 1 - 2010.

“Communicating Ratemaking and Regulatory Concepts to a Utility’s Stakeholders,” American Gas Association, Communications and Marketing Committee Meeting, March 16-17, 2010

“Managing Regulatory Risk,” RMEL Workshop, October 8, 2009

“State Regulatory and Legislative Issues Affecting Utilities,” American Gas Association Financial Forum, May 3-5, 2009.

“Financial Incentives for Energy Efficiency: Lessons Learned to Date,” American Gas Association, Rate Committee Meeting and Regulatory Issues Seminar, April 5-8, 2009.

“Breaking the Link Between Sales and Profits: Current Status and Trends,” Energy Bar Association, Electricity Regulation and Compliance Committee, February 17, 2009.

“State Ratemaking Issues for Gas Distribution Utilities,” Energy Law Journal, Volume 29, No. 2, 2008 (Report of the Natural Gas Regulation Committee).

“Current Issues in Cost Allocation and Rate Design for Utilities,” SNL Energy, Utility Rate Cases Today: The Issues and Innovations, November 6, 2008.

“Current Issues in Revenue Decoupling for Gas Utilities,” American Gas Association, Financial and Investor Relations Webcast, October 16, 2008.

“Addressing Utility Business Challenges Through the State Regulatory Process,” American Gas Association, 2008 Legal Forum, July 20-22, 2008.

“Earning on Natural Gas Energy Efficiency Programs,” American Gas Association Rate and Regulatory Issues Conference Webcast, May 23, 2008.

“State Regulatory Directions: Utility Challenges and Solutions,” American Gas Association Financial Forum, May 4, 2008.

“Ratemaking and Financial Incentives to Facilitate Energy Efficiency and Conservation,” The Institute for Regulatory Policy Studies, Illinois State University, May 1, 2008.

“Update on Revenue Decoupling and Innovative Rates,” American Gas Association, Rate Committee Meeting and Regulatory Issues Seminar, March 10, 2008.

“Update on Revenue Decoupling and Utility Based Energy Conservation Efforts,” American Gas Association, Rate and Regulatory Issues Conference Webcast, May 30, 2007.

“A Renewed Focus on Energy Efficiency by Utility Regulators,” American Gas Association, Rate and Regulatory Issues Seminar and Committee Meetings, March 26, 2007.

"The Continuing Ratemaking Challenge of Declining Use Per Customer," American Public Gas Association, Gas Utility Management Conference, October 31, 2006.

"Understanding and Managing the New Reality of Utility Costs in the Natural Gas Industry," Financial Research Institute, Public Utility Symposium, University of Missouri – Columbia, September 27, 2006.

"Ratemaking and Energy Efficiency Initiatives: Key Issues and Perspectives," American Gas Association, Ratemaking Webcast, September 14, 2006.

"Ratemaking Solutions in an Era of Declining Gas Usage and Price Volatility," Northeast Gas Association, 2006 Executive Conference, September 10-12, 2006.

"Rethinking Natural Gas Utility Rate Design: A Framework for Change," American Gas Foundation and The NARUC Foundation, Executive Forum at Ohio State University, May 2006.

"Rate Design, Trackers, and Energy Efficiency – Has the Paradigm Shifted?" Energy Bar Association, Midwest Energy Conference, March 2006.

"Key Regulatory Issues Affecting Energy Utilities," American Gas Association, Lunch 'n Learn Session, November 2005.

"Decoupling, Conservation, and Margin Tracking Mechanisms," American Gas Association, Rate & Regulatory Issues – Audio Conference Series, October 2005.

"In Search of Harmony, [Utilities and Regulators] Respondents Weigh in with Needed Actions," Public Utilities Fortnightly, November 2005

"The Use of Trackers as a Regulatory Tool," Midwest Energy Association – Legal, Regulatory, and Government Relations Roundtable, October 9-11, 2005.

"Rate Design and the Regulatory Environment," American Gas Association Finance Committee Meeting, October 2005.

"Creative Utility Regulatory Strategies in a High Price Environment," American Gas Association Executive Conference, September 2005.

"Revenue Decoupling Programs: Aligning Diverse Interests," The Institute for Regulatory Policy Studies, Illinois State University, May 2005.

"Key Regulatory Issues Affecting Energy Utilities," American Gas Association Financial Forum, May 2005.

“Energy Efficiency and Revenue Decoupling: A True Alignment of Customer and Shareholder Interests,” American Gas Association Rate and Regulatory Issues Seminar and Committee Meetings, April 2005.

“Rate Case Techniques: Strategies and Pitfalls” American Gas Association, Rate & Regulatory Issues – Audio Conference Series, March 2005.

“Regulatory Uncertainty: The Ratemaking Challenge Continues,” Public Utilities Fortnightly, Volume 142, No. 11, November 2004.

“Current Trends in Utility Rate Cases and Pricing: Surveying the Regulatory Landscape,” Platts Rate Case & Pricing Symposium, October 25-26, 2004.

“State Regulatory Oversight of the Gas Procurement Function” Energy Bar Association, Natural Gas Regulation Committee, Energy Law Journal, Volume 25, No. 1, 2004.

“Cost Allocation Across Corporate Divisions,” American Gas Association, Rate and Strategic Issues Committee Meeting, April 2003

“Unbundling Initiatives – How Far Can We Go?,” American Gas Association Restructuring Seminar: Service and Revenue Enhancements for the Energy Distribution Business, December 2002.

“Utility Regulation and Performance-Based Ratemaking (PBR),” PBR Briefing Session sponsored by BC Gas Utility Ltd., April 2002.

“LDC Perspectives on Managing Price Volatility,” American Gas Association, Rate and Strategic Issues Committee Meeting, March 2002.

“Can a California Energy Crisis Occur Elsewhere?,” American Gas Association Rate and Strategic Issues Committee Meeting, March 2001.

“Downstream Unbundling: Opportunities and Risks,” American Gas Association Rate and Strategic Issues Committee Meeting, April 2000.

“Form Follows Function: Which Corporate Strategy Will Predominate in the New Millennium?,” American Gas Association 1999 Workshop on Regulation and Business Strategy for Utilities in the New Millennium, August 1999.

“Total Energy Providers: Key Structural and Regulatory Issues,” American Gas Association, Rate and Strategic Issues Committee Meeting, April 1999.

“The Gas Industry: A View of the Next Decade,” National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Accounts, 1998 Fall Meeting, September 1998.

“Regulatory Responses to the Changing Gas Industry,” Canadian Gas Association, 1998 Corporate Challenges Conference, September 1998.

"Trends in Performance-Based Pricing," American Gas Association Financial Analysts Conference, May 1998.

"Unbundling – An Opportunity or Threat for Customer Care?," presented at the American Gas Association/Edison Electric Institute Customer Services Conference and Exposition, May 1998.

"Experiences in Electric and Gas Unbundling," presented at the 1997 Indiana Energy Conference, December 1997.

"Asset and Resource Migration Strategies," presented at the Strategic Marketing for the New Marketplace Conference sponsored by Electric Utility Consultants, Inc. and Metzler & Associates, November 1997.

"The Status of Unbundling in the Gas Industry," presented at the American Gas Association Finance Committee, March 1997.

Seminar organizer and co-moderator at the American Gas Association, *"Workshop on Unbundling and LDC Restructuring,"* July 1995.

"State Regulatory Update," presented at the American Gas Association - Financial Forum, May 1995.

"Gas Pricing Strategies and Related Rate Considerations," presented before the Rate Committee of the American Gas Association, April 1995.

"Avoided Cost Concepts and Management Considerations," presented before the Workshop on Avoided Costs in a Post-636 Industry, sponsored by the Gas Research Institute and Wisconsin Center for Demand-Side Research, June 1994.

"DSM Program Selection Under Order No. 636: Effect of Changing Gas Avoided Costs," presented before the NARUC-DOE Fifth National Integrated Resource Planning Conference, Kalispell, MT, May 1994.

"A Review of Recent Gas IRP Activities," presented before the Rate Committee of the American Gas Association, March 1994.

Seminar organizer and co-moderator at the American Gas Association seminar, *"The Status of Integrated Resource Planning,"* December 1993.

"Industry Restructuring Issues for LDCs, presented before the American Gas Association," Advanced Regulatory Seminar, University of Maryland, 1993-1996.

"Acquiring and Using Gas Storage Services," presented before the 8th Cogeneration and Independent Power Congress and Natural Gas Purchasing '93, June 1993.

“Capitalizing on the New Relationships Arising Between the Various Industry Segments: Understanding How You Can Play in Today’s Market,” presented before the Institute of Gas Technology’s Natural Gas Markets and Marketing Conference, February 1993.

“The Level Playing Field for Fuel Substitution (or, the Quest for the Holy Grail),” presented before the 4th Natural Gas Industry Forum - Integrated Resource Planning: The Contribution of Natural Gas, October 1992.

“Key Methodological Considerations in Developing Gas Long-Run Avoided Costs,” presented before the NARUC-DOE Fourth National Integrated Resource Planning Conference, September 1992.

“Mega-NOPR Impacts on Transportation Arrangements for IPPs,” co-presented before the 7th Cogeneration and Independent Power Congress and Natural Gas Purchasing ’92, June 1992.

“Cost Allocation in Utility Rate Proceedings,” presented before the Ohio State Bar Association - Annual Convention, May 1992.

“The Long and the Short of LRACs,” presented before the Natural Gas Least-Cost Planning Conference April 1992, sponsored by Washington Gas Company and the District of Columbia Energy office.

Seminar organizer and moderator at the American Gas Association seminar, *“Integrated Resource Planning: A Primer,”* December 1991.

Session organizer and moderator on integrated resource planning issues at the American Gas Association Annual Conference, October 1991.

“Strategic Perspectives on the Rate Design Process,” presented before the Executive Enterprises, Inc. conference, “Natural Gas Pricing and Rate Design in the 1990s,” September 1990.

“Distribution Company Transportation Rates,” presented before the American Gas Association–Advanced Regulatory Seminar, University of Maryland 1987-1992.

“Design of Distribution Company Gas Rates,” presented before the American Gas Association - Gas Rate Fundamentals Course, University of Wisconsin – Madison, Graduate School of Business, 1985-2007.

Seminar organizer, speaker and panel moderator at the American Gas Association seminar, *“Natural Gas Strategies: Integrating Supply Planning, Marketing and Pricing,”* 1988-1990.

“Local Distribution Company Bypass - Issues and Industry Responses,” (Co-author) June 1989.

“So You Think You Know Your Customers!,” presented before the American Gas Association–Annual Marketing Conference, April 1990.

“Gas Transportation Rate Considerations - A Review of Gas Transportation Practices Based on the Results of the A.G.A. Annual Pricing Strategies Survey,” presented before the Rate Committee of the American Gas Association, April 1985-1991.

“Market-Based Pricing Strategies - Targeted Rates to Meet Competition,” presented before the American Gas Association Annual Marketing Conference, March 1989.

“Gas Rate Restructuring Issues - Targeted Prices to Meet Competition,” presented before the Fifteenth Annual Rate Symposium, University of Missouri, February 1989.

“Gas Transportation Rates - An Integral Part of a Competitive Marketplace,” American Gas Association, Financial Quarterly Review, Summer 1987.

“Gas Distributor Rate Design Responses to the Competitive Fuel Situation,” American Gas Association, Financial Quarterly Review, October 1983.

“Demand-Commodity Rates: A Second Best Response to the Competitive Fuel Situation,” presented before the American Gas Association, Ratemaking Options Forum, September 1983.

“Current Rate and Regulatory Issues,” presented before the National Fuel Gas Regulatory Seminar, July 1986.

EDUCATIONAL AND TRAINING ACTIVITIES

Past Chairman, Rate Training Subcommittee, Rate and Strategic Issues Committee of the American Gas Association.

Seminar organizer and co-moderator at the American Gas Association, “Workshop on Unbundling and LDC Restructuring,” July 1995.

Course organizer and speaker at the annual industry course, American Gas Association – Gas Rate Fundamentals Course, University of Wisconsin – Madison, and University of Chicago – School of Business, 1985 – 2016.

Course organizer and speaker at the annual industry course, American Gas Association – Advanced Regulatory Seminar, University of Maryland - College Park and the University of Chicago – School of Business, 1987 –1992, and 2012-2016.

Co-founder, course director and instructor in the annual course, “Principles of Gas Utility Rate Regulation” sponsored by The Center for Professional Advancement 1982-1987.

Contributing Author of the Fourth Edition of “Gas Rate Fundamentals,” American Gas Association, 1987 edition.

Organizer, Editor, and Contributing Author of the upcoming Fifth Edition of “Gas Rate Fundamentals,” American Gas Association (in progress).

Contributing Author of “Regulation of the Gas Industry,” LexisNexis Matthew Bender, 2016.