

JEFF D. MAKHOLM
Senior Vice President

National Economic Research Associates, Inc.
One Main Street
Cambridge, Massachusetts 02142
(617) 621-0444

Dr. Makhholm concentrates on the issues surrounding the privatization, regulation and deregulation of energy and transportation industries. These issues include the broad categories of pricing, market definition and the components of reasonable regulatory practices. Specific pricing issues include tariff design, incentive ratemaking, and the unbundling of prices and services. Issues of market definition include assessments of mergers, including the identification and measurement of market power. Issues of reasonable regulatory practices include the creation of credible and sustainable accounting rules for ratemaking as well as the establishment of administrative procedures for regulatory rulemaking and adjudication. On such issues among others, Dr. Makhholm has prepared expert testimony, reports and statements, and has appeared as an expert witness in many state, federal and U.S. district court proceedings as well as before regulatory bodies and Parliamentary panels abroad.

Dr. Makhholm's clients in the United States include privately held utility corporation, public corporations and government agencies. Focusing mainly in the areas of gas and electric utilities, he has represented dozens of gas distribution utilities, as well as both intrastate and interstate gas pipeline companies and gas producers. Dr. Makhholm has also worked with many leading law firms engaged in natural gas and electricity issues.

Internationally, Dr. Makhholm has directed an extensive number of projects in the utility and transportation businesses in 20 countries on six continents. These projects have involved work for investor-owned and regulated business as well as for governments and the World Bank. These projects have included advance pricing and regulatory work prior to major gas, railroad and toll highway privatizations (Poland, Argentina, Bolivia, Mexico, Chile and Australia), gas industry restructuring and/or pricing studies (Canada, China, Spain, Morocco, Mexico and the United Kingdom), utility mergers and market power analyses (New Zealand), gas development and and/or contract and financing studies (Tanzania, Egypt, Israel and Peru), regulatory studies (Chile, Argentina), and oil pipeline transport financing and regulation (Russia). As part of this work, Dr. Makhholm has prepared reports, drafted regulations and conducted training sessions for many government, industry and regulatory personnel.

Dr. Makhholm has published a number of articles in Public Utilities Fortnightly, Natural Gas and The Electricity Journal—many involving emerging issues of wholesale and retail competition in gas and electricity, including the issues of unbundled and competitive transport, secondary markets and stranded costs. He is a frequent speaker in the U.S. and abroad at conferences and seminars addressing market, pricing and regulatory issues for the energy and transportation sectors.

EDUCATION

UNIVERSITY OF WISCONSIN-MADISON,
MADISON, WISCONSIN
Ph.D., Economics, 1986
Dissertation: Sources of Total Factor Productivity in the Electric Utility Industry
M.A., Economics, 1985

BROWN UNIVERSITY
PROVIDENCE, RHODE ISLAND
Graduate Study, 1980-1981

UNIVERSITY OF WISCONSIN-MILWAUKEE
MILWAUKEE, WISCONSIN
M.A., Economics, 1980
B.A., Economics, 1978

EMPLOYMENT

1996-present	<u>Senior Vice President.</u> National Economic Research Associates, Inc., (NERA) Cambridge, Massachusetts.
1986-1996	<u>Vice President/Senior Consultant.</u> National Economic Research Associates, Inc., (NERA) Cambridge, Massachusetts.
1987-1989	<u>Adjunct Professor.</u> College of Business Administration, Northeastern University, Boston, Massachusetts
1984-1986	<u>Consulting Economist.</u> National Economic Research Associates, Inc., (NERA) Madison, Wisconsin.
1983-1984	<u>Consulting Economist.</u> Madison Consulting Group, Madison, Wisconsin.
1981-1983	<u>Staff Economist.</u> Associated Utility Services, Inc., Moorestown, New Jersey.

Before the State of Maine Public Utilities Commission, Direct Testimony of Jeff D. Makhholm and Charles J. Zarkadas on behalf of Community Service Telephone Company. April 4, 2001. Subject: Cost of equity capital.

Before the State of New Jersey, Division of the Ratepayer Advocate, Cross-Answering Testimony on behalf of Public Service Electric and Gas Company, Case No. GM00080564, March 26, 2001. Subject: Forecasting the net market value for natural gas transportation and storage contracts.

Before the Indiana Utility Regulatory Commission. Joint Testimony of Jeff D. Makhholm and Charles J. Zarkadas on behalf of Tipton Telephone Company, Inc, February 23, 2001. Subject: Cost of capital.

Before the Federal Energy Regulatory Commission. Testimony on behalf of Sinclair Oil Corporation regarding an application of Chase Transportation Company for the authority to charge market-based rates, February 16, 2001. Subject: Regulation of oil products pipelines.

Before the Supreme Court of Victoria at Melbourne, in the matter of an appeal brought by TXU Electricity Limited of the Final Determination of the Office of the Regulator General of the 2001 to 2005 tariffs for the Victorian electricity distributors. Testimony on behalf the Office of the Regulator General, February 11, 2001. Subject: The distinctions between price cap and rate of return regulatory practices.

Before the Australian Competition Tribunal. Statement on behalf of the National Competition Council regarding the application under section 38(1) of the Gas Pipelines Access Law for review of the decision by the Minister for Industry, Science and Resources to Cover (i.e., regulate) the Eastern Gas Pipeline pursuant to the provisions of the National Third Party Access Code for Natural Gas Pipeline Systems and the Gas Pipelines Access Law, January 19, 2001. Subject: Evaluation of the criteria for regulating an interstate gas pipeline.

Before the Public Utility Commission of Texas. Rebuttal Testimony on behalf of American Electric Power Texas Companies (Central Power & Light Company, Southwest Electric Power Company, West Texas Utilities Company), Entergy Gulf States, Inc., Reliant Energy HL&P, Southwestern Public Service Company, Texas-New Mexico Power Company, and TXU Electric Company. October 27, 2000. Subject: Capital structure and allowed return on equity.

Before the Federal Energy Regulatory Commission, "Assessment of PJM Owner's Transmission Enhancement Package," prepared in support of the PJM (Pennsylvania, New Jersey, Maryland) electricity transmission owners as part of their Order No. 2000 compliance filing. Docket No. RT01-2, October 11, 2000. Subject: Analysis of incentive package for transmission efficiency.

Before the Appeal Panel under Section 38(2) of the Office of the Regulator-General Act 1994, Victoria, Australia. In the matter of an appeal pursuant to s.37 of the Act brought by United Energy Ltd., Testimony on behalf of the Office of the Regulator General, October 10, 2000. Subject: The distinctions between price cap and traditional cost-based regulatory practices.

Before the Alberta Energy and Utilities Board, Evidence on behalf of UtiliCorp Networks Canada, September 1, 2000. Subject: Testimony on the elements of the company's performance based regulation plan.

Before the State of Maine Public Utilities Commission, Surrebuttal Testimony on behalf of Central Maine Power Company, Case No. 99-666, August 10, 2000. Subject: Empirical analysis and productivity offset for price cap formula.

RECENT TESTIMONY (CONT.)

Before the State of New Jersey, Division of the Ratepayer Advocate, Testimony on behalf of Public Service Electric and Gas Company, Case No. GM00080564 , July 26, 2000. Subject: Forecasting the net market value for natural gas transportation and storage contracts.

Before the State of Maine Public Utilities Commission, Rebuttal Testimony on behalf of Central Maine Power Company, Case No. 99-666, June 22, 2000. Subject: Empirical analysis and productivity offset for price cap formula.

Before the Illinois Commerce Commission, Surrebuttal Testimony on behalf of Commonwealth Edison Company, Case No. 99-0013, Phase III, June 12, 2000. Subject: Investigation Concerning the Unbundling of delivery Services Under Section 16-108 of the Public Utilities Act.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Commonwealth Edison Company, Case No. 99-0013, Phase III, June 5, 2000. Subject: Investigation Concerning the Unbundling of delivery Services Under Section 16-108 of the Public Utilities Act.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Commonwealth Edison Company, Case No. 99-0013, Phase II, October 21, 1999. Subject: Billing credits for unbundled services.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Commonwealth Edison Company, Case No. 99-0115, October 15, 1999. Subject: Recouping nuclear decommissioning expenses for electric power plants.

Before the State of Maine Public Utilities Commission, Report on behalf of Central Maine Power Company, Case No. 97-580 (Phase II), October 12, 1999. Subject: Cost of service for unbundled electricity transmission and distribution.

Before the Illinois Commerce Commission, Direct Testimony on behalf of the Commonwealth Edison Company, Case No. 99-0013, Phase II, October 8, 1999. Subject: Billing credits for unbundled services.

Before the State of Maine Public Utilities Commission, Direct Testimony on behalf of Central Maine Power Company, Case No. 99-666, September 30, 1999. Subject: Empirical analysis and productivity offset for price cap formula.

Before the High Court of New Zealand, The Commerce Commission versus Caltex New Zealand Limited, Mobil Oil New Zealand and Shell New Zealand Limited. Reply Brief of Evidence, August 23, 1999. Subject: Price fixing in petroleum marketing.

Before the State of New Hampshire Public Utilities Commission, Direct Testimony on behalf of Chichester Telephone Company, Kearsarge Telephone Company, and Meriden Telephone Company, July 19, 1999. Subject: Determination of a fair cost of capital.

Before the High Court of New Zealand, The Commerce Commission versus Caltex New Zealand Limited, Mobil Oil New Zealand and Shell New Zealand Limited. Brief of Evidence, July 14 1999. Subject: Price fixing in petroleum marketing.

Before the State of Connecticut, Department of Public Utility Control, Prefiled Testimony on behalf of The Southern Connecticut Gas Company, Case No. 99-04-18, June 18, 1999. Subject: Recoverability of pipeline expansion costs.

RECENT TESTIMONY (CONT.)

Before the Illinois Commerce Commission, Surrebuttal Testimony on Behalf of Commonwealth Edison Company, Case No. 99-0117, May 17, 1999. Subject: Whether marginal cost pricing principles can provide the basis for an efficient tariff design for the company's delivery service tariffs.

Before the Illinois Commerce Commission, Rebuttal Testimony on Behalf of Commonwealth Edison Company, Case No. 99-0117, May 10, 1999. Subject: Whether marginal cost pricing principles can provide the basis for an efficient tariff design for the company's delivery service tariffs.

Before the State of Illinois, Illinois Commerce Commission. Direct Testimony on behalf of Commonwealth Edison Company, Case No. 99-0017, March 12, 1999. Subject: Whether marginal cost pricing principles can provide the basis for an efficient tariff design for the company's delivery service tariffs.

Before the Federal Energy Regulatory Commission, Reply Testimony on behalf of CITGO Petroleum Corporation, Case No. OR-99-1, March 19, 1999. Subject: To review and comment on Explorer Pipeline's application to the Federal Energy Regulatory Commission for market-based oil pipeline rates.

Before the State of Illinois, Illinois Commerce Commission. Reply Testimony on behalf of Commonwealth Edison Company, Case No. 99-0013, February 17, 1999. Subject: Unbundling services provided by electric distribution companies.

Before the State of Illinois, Illinois Commerce Commission. Direct Testimony on behalf of Commonwealth Edison Company, Case No. 99-0013, February 4, 1999. Subject: Unbundling services provided by electric distribution companies.

Before the State of Illinois, Illinois Commerce Commission. Rebuttal Testimony on behalf of Commonwealth Edison Company, Case No. 98-0680, February 10, 1999. Subject: Tariff structure for electric distribution companies.

Before the Federal Energy Regulatory Commission, Testimony on behalf of CITGO Petroleum Corporation, Case No. OR-99-1, January 29, 1999. Subject: To review and comment on Explorer Pipeline's application to the Federal Energy Regulatory Commission for market-based rates.

Before the State of Illinois, Illinois Commerce Commission. Rebuttal Testimony on behalf of Illinois Gas Transmission Company, Case No. 98-0510, January 11, 1999. Subject: Joint Application of Illinois Gas Transmission Company and Nuevo Energy Company for Certification of Illinois Gas Transmission Company as a Common Carrier Pipeline.

In the matter of an arbitration to determine the price for treatment of Kapuni gas, before Sir Ian Barker QC between Shell Company and Todd Petroleum v. Natural Gas Corporation of New Zealand, November 17, 1998, Statement of Evidence of Jeff D. Makhholm.

Before the United States District Court for the Western District of Missouri (Riverside Pipeline Company, *et al*, v. Panhandle Eastern Pipe Line Company, Case No. 97-0642-CV-W-4), Supplemental Expert Report of Jeff D. Makhholm on behalf of Riverside Pipeline Company, *et al*, October 28, 1998.

Before the United States District Court for the Western District of Missouri (Riverside Pipeline Company, *et al*, v. Panhandle Eastern Pipe Line Company, Case No. 97-0642-CV-W-4), Expert Report on behalf of Riverside Pipeline Company, *et al*, July 5, 1998.

RECENT TESTIMONY (CONT.)

Before the Australian Competition and Consumer Commission (ACCC) and the Victorian Office or the Regulator General (ORG), prepared comments at a public hearing held in Melbourne regarding the cost of capital for Victoria's gas transmission and distribution franchises, on behalf of BHP Petroleum Pty Ltd, July 3, 1998.

Before the Federal Energy Regulatory Commission, Prepared Comments submitted on behalf of the Edison Electric Institute on the Commission's "ISOs and Transmission Pricing" Panel, Docket No. PL98-5-000. (April 16, 1998).

Before the High Court of New Zealand, Auckland Registry, Affidavit on Behalf of Viaduct Harbour Holdings, Ltd., Docket No. CP 786/97, August 8, 1997. Subject: Economic analysis of acquisition of land by a public authority

Before the Pennsylvania Public Utility Commission, Prepared Direct Testimony on behalf of Duquesne Light Company, Docket No. R-00974104, July 12, 1997. Subject: Cost of capital and treatment of stranded electric utility costs as part of Pennsylvania's overall electricity restructuring plan.

Before the Federal Energy Regulatory Commission, Prepared Answering Testimony on behalf of Consolidated Edison Company of New York Inc., et al, Docket No RP95-197-000, March 25, 1997. Subject: The pricing of expanded transmission capacity.

Before the State Corporation Commission of the State of Kansas, Prepared Direct Testimony on behalf of Kansas Pipeline Partnership, Docket No. 97-WSRG-312-PGA, May 23, 1997, in the matter of the Partial Suspension of Western Resources' Monthly Purchased Gas Adjustment (PGA) Effective Date December 1, 1996. Subject: Prudence examination of several gas commodity and gas transportation contracts.

Before the Federal Energy Regulatory Commission, Prepared Answering Testimony on behalf of Consolidated Edison Company of New York, Inc., Owens Corning, PECO Energy Company, et al, Docket No. RP95-197-71-001, March 24, 1997. Subject: The pricing of expanded transmission capacity.

Before the Massachusetts Department of Public Utilities, Prepared Direct Testimony on behalf of Distrigas of Massachusetts Corporation, Docket No. D.P.U. 96-50, July 19, 1996. Subject: Retail unbundling of local distribution rates and recovery of stranded costs.

Before the Federal Energy Regulatory Commission, Prepared Cross-Answering Testimony on behalf of Consolidated Edison Company of New York, Inc., Owens-Corning Fiberglas Corporation, PECO Energy Company, et al., Docket No. RP95-197-000, May 28, 1996. Subject: The pricing of expanded transmission capacity.

Before the New Zealand Select Parliamentary Committee on Transportation, Comments on the Proposed Amendments to the Regulation of Airports in New Zealand (with Alfred E. Kahn), March 13, 1996. Subject: The oversight of airport authorities and conduct of airport pricing practices.

Before the Virginia State Corporation Commission, Prepared Rebuttal Testimony on behalf of Southwestern Virginia Gas Company, Case No. PUE950019, October 13, 1995. Subject: Fair rate of return.

Before The State Corporation Commission of the State of Kansas, Prepared Rebuttal Testimony on behalf of Kansas Pipeline Partnership, Docket No. 192,506-U, Docket No. 192,391-U, Docket No. 192,507-U, August 1, 1995. Subject: Competitive entry and pricing of new gas pipeline capacity.

RECENT TESTIMONY (CONT.)

Before the State of Rhode Island and Providence Plantations Public Utilities Commission, Prepared Rebuttal Testimony on behalf of Valley Resources, Inc., Case No. 2276, June 15, 1995. Subject: Cost of capital

Before a private arbitration panel, in the Matter of Marathon Oil Company v. Southern California Gas Company, Expert Rebuttal Report, April 21, 1995. Subject: Capacity costs on major U.S. pipeline companies.

Before a private arbitration panel, in the Matter of Marathon Oil Company v. Southern California Gas Company, Expert Initial Report, April 7, 1995. Subject: The effect of U.S. interstate gas pipeline capacity on gas contract prices and delivery conditions.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission, Prepared Direct Testimony on behalf of Valley Resources, Inc., Case No. 2276, January 19, 1995. Subject: Cost of capital.

Before the Virginia State Corporation Commission, Prepared Direct Testimony on behalf of Virginia Electric and Power Company, Case No. PUE940052, January 17, 1995. Subject: Utility line extension and pricing policies.

Before the Virginia State Corporation Commission, Prepared Direct Testimony on behalf of Virginia Electric and Power Company, Case No. PUE940031, September 30, 1994. Subject: Utility line extension and pricing policies.

Before the Federal Energy Regulatory Commission, Comments of NERA, sponsored by Commonwealth Gas Company and Yankee Gas Services, Docket No. PL94-4-000, (with Louis Guth) September 26, 1994. Subject: Pricing interstate pipeline capacity expansions.

Before the Kansas Corporation Commission, Prepared Rebuttal Testimony Regarding the Fair Rate of Return on behalf of Kansas Pipeline Partnership and Kansas Natural Partnership, Docket No. 190,362-U, September 23, 1994. Subject: Cost of capital.

Before the Kansas Corporation Commission, Prepared Rebuttal Testimony on Market Entry Cost Recovery on behalf of Kansas Pipeline Partnership and Kansas Natural Partnership, Docket No. 190,362-U, September 23, 1994. Subject: Gas pipeline market power in firm delivery capacity and evaluation of the economic benefits of pipeline entry.

Before the California Public Utilities Commission, Amended Direct Testimony on behalf of Sierra Pacific Power Company, Application 94-05-009, July 1, 1994. Subject: Cost of capital.

Before the Federal Energy Regulatory Commission, Prepared Rebuttal Testimony on behalf of the New England Customer Group of 15 Natural Gas Distribution Companies, Docket No. RP91-203-000 (Tennessee Gas Pipeline Company), May 27, 1994. Subject: Gas pipeline rate design.

Before the Indiana Utility Regulatory Commission, Prepared Rebuttal Testimony on behalf of Northern Indiana Fuel and Light Company, May 9, 1994. Subject: Evaluation of gas supply framework for new gas storage services.

Before the California Public Utilities Commission, Prepared Direct Testimony on behalf of Sierra Pacific Power Company, May 6, 1994. Subject: Fair rate of return.

Before the Federal Energy Regulatory Commission, Prepared Cross-Answering Testimony on behalf of the New England Customer Group of 15 Natural Gas Distribution Companies, Docket No. RP91-203-000 (Tennessee Gas Pipeline Company), May 6, 1994. Subject: Interruptible transport rates and hourly take flexibility on interstate gas pipelines.

RECENT TESTIMONY (CONT.)

Before the Indiana Utility Regulatory Commission, Prepared Rebuttal Testimony on behalf of Northern Indiana Public Service Company, Cause No. 37306-GCA 39, March 30, 1994. Subject: Security of supply and methods for evaluating the appropriateness of gas storage investments.

Before the Federal Energy Regulatory Commission, Prepared Direct and Answering Testimony on behalf of the New England Customer Group of 15 Natural Gas Distribution Companies, Docket No. RP91-203-000 (Tennessee Gas Pipeline Company), February 14, 1994. Subject: Gas pipeline rate design.

Before the Federal Energy Regulatory Commission, Prepared Rebuttal Testimony on behalf of the Algonquin Customer Group of 14 Natural Gas Distribution Companies, Docket No. RP93-14-000 (Algonquin Gas Transmission Company), January 12, 1994. Subject: Assignment and sale of pipeline capacity under open access.

PUBLICATIONS AND WORKING PAPERS

“Performance-Based Regulation Options for Electricity Distribution in Alberta,” –Paper written for UtiliCorp Networks Canada, July 19, 2000.

“Incentive Regulation Meets Electricity Transmission on a Grand Scale: FERC Order No. 2000 and PBR,” *The Electricity Journal*, May 2000, pp.57-64.

“Gas and Electricity Sector Convergence: Economic Policy Implications.” -Paper written for the World Bank, December 8-9, 1998.

“ISO’s Not the Answer for Gas,” *Natural Gas*, John Wiley & Sons, Inc., December 1997, pp. 1-6.

Utility Regulation 1997: Economic Regulation of Utilities and Network Industries Worldwide (Chapter on United States), Center for the Study of Regulated Industries, (ISBN 1-901597-00-8) 1997.

“X Marks the Spot: How to Calculate Price Caps for the Distribution Function,” *Public Utilities Fortnightly*, Public Utilities Reports, Inc., December 1997, p. 52.

“Price Cap Plans for Electricity Distribution Companies Using TFP Analysis,” NERA Working Paper, July 23, 1997.

“Rocks on the Road to Effective Regulation: The Necessary Elements of Sound Energy Regulation,” Paper presented at the Brazil-U.S. Aspen Global Forum, December 5, 1996.

“Profit Sharing and “Sliding Scale” Regimes,” (Draft) with Michael Quinn and Charles Augustine, February 29, 1996.

“FERC Takes the Wrong Path in Pricing Policy,” *Natural Gas*, John Wiley & Sons, Inc., September, 1995. pp. 7-11.

The Distribution and Pricing of Sichuan Natural Gas, Chonxing University Press, Chonxing, China, (ISBN 7-5624 -1006-2/F 94) 1995.

“Secondary Market Can Compete,” *Natural Gas*, John Wiley & Sons, Inc., October 1994, pp. 13-17

“Gas Pipeline Capacity: Who Owns It? Who Profits? How Much?,” *Public Utilities Fortnightly*, Public Utilities Reports, Inc., October 1994, pp. 17-20.

“Calculating Fairness,” with D.O. Sander, *Public Utilities Fortnightly*, Public Utilities Reports, Inc., November 15, 1993. pp. 25-29

“Four Common Errors in Applying the DCF Model in Utility Rate Cases,” with D.O. Sander, NERA Working Paper, February 1992.

“The Risk Sharing Strawman,” *Public Utilities Fortnightly*, Public Utilities Reports, Inc., July 7, 1988. pp. 24-29.

“Evaluating the Threat of Municipalization, The Economics of Uncertainty with Municipalization Case Studies,” with J. James Tasillo, Jr., NERA Working Paper, May 1988.

“Pareto Optimality Through Non-Collusive Bilateral Monopoly With Cost-Of-Service Regulation,” with C. J. Cicchetti, NERA Working Paper, April 1988.

“The FERC Discounted Cash Flow: A Compromise in the Wrong Direction,” with C. J. Cicchetti, *Public Utilities Fortnightly*, July 9, 1987. pp. 11-15.

RECENT INTERNATIONAL REPORTS

“Manual de Procedimientos para el Sistema Uniforme de Cuentas Regulatorias Eléctricas (SUCRE) de México” (April 2000). The report includes an explanation of each of the accounts needed for regulation, recording procedures and the structure the information should take when reporting to the regulator.

“Investigation into Petronets’ Liquid Fuels Pipeline Tariffs: Final Report” (March 9th, 2000). This report presents NERA opinions in the quasi-arbitration of the tariffs disputes in the oil industry in South Africa for their liquids pipelines.

“Seeking Genuine Gas Competition in NSW”:, prepared for BHP Petroleum Pty. Ltd., February 18, 2000.

“Análisis y Revisión del Recurso de Revocatoria Interpuesto por la Compañía Boliviana de Energía S.A. (COBEE) a la Resolución SSDE N° 92/99 de la Superintendencia de Electricidad” (September 6, 1999). This report represents NERA’s opinion on COBEE’s appeal in the electricity tariff review process in Bolivia (report in spanish).

“Gas Sector Regulation Consultancy Services” report prepared for the Vietnam Oil and Gas Corporation, August 10, 1999.

“Natural Gas Demand Estimation for Guatemala, Honduras and El Salvador” (July 19th, 1999). This report done for an international consortium of companies presents calculations of prices and volumes of natural gas demand for three Central American countries if a pipeline is built from Mexico.

“Comments on East Australian Pipeline Limited Access Arrangements: (July 15, 1999). Report prepared on behalf of Incitec Ltd.

“Supplementary Submission to IPART on AGLGN’s Proposed Access Arrangements” on behalf of Incitec Limited (April 27th, 1999). This submission discusses reload practices, customer contributions, operating expenses and recalculates charges for a user of the distribution network in New South Wales, Australia.

“Supplementary Submission to IPART on AGLGN’s Proposed Costs and Tariffs” on behalf of BHP (April 15th, 1999). This submission explains how NERA recalculated charges for AGLGN in New South Wales, Australia.

“Initial Comments on AGLGN’s Revised Access Arrangement Information” on behalf of BHP (March 20th, 1999). This submission presents NERA’s comment to AGLGN submission to IPART in New South Wales, Australia.

“International Restructuring Experience” (February 12th, 1999). This paper surveys a number of countries whose experience of restructuring and competition in the electricity sector is directly relevant to the proposed changes in Mexico – Argentina, Australia, Chile, Guatemala, New Zealand, Norway, Spain, the US and the UK

“Report I: Review of the Regulatory Framework” (January 18th, 1999). This report presents the options for a natural gas framework in Peru.

“Conceptual Framework for the Reform of the Electricity Sector in Mexico: White Paper” (November 24th, 1998). This report represents the White Paper for restructuring of the electricity sector in Mexico which is being used in Congress for debate.

“Precios del Gas Natural para la Generación de Electricidad en el Perú” (November 16th, 1998). This report analyzes different alternatives for the treatment of natural gas prices in the electricity tariff model (report in Spanish).

RECENT INTERNATIONAL REPORTS (CONT.)

“Tariffs and Subsidies: Report for the Tariffs Group” (November 10th, 1998). This report presents recommendation on the path for tariffs and subsidies for 1999 to the Electricity Tariffs Group of the Government of Mexico.

“Gasoducto México-Guatemala: Informe Final” (October 22nd, 1998). This report analyzes the legal and regulatory framework in both Mexico and Guatemala and costs and volumes for the building of a natural gas pipeline connecting both countries. A copy of the report was given by President Zedillo (Mexico) to President Arzú (Guatemala) (report in Spanish).

“Checks and Balances in Regulating Power Pools: Seven case Studies. A Report for the Electricity Pool of England and Wales” (September 10th, 1998). This report surveys the regulation of power pools in electricity industries around the world.

“Fuels Policy Group: Recommendations” (September 11th, 1998). This report presents recommendations to the Government of Mexico on their fuels policies for the electricity sector.

“Análisis de Costos e Inversiones. Revisión Tarifaria de Transener” (August 25, 1998). Report given to ENRE (the Argentinean electricity regulator) on behalf of a Consortium of Generators on the analysis of costs and investments to be considered for the revenue requirement of the electricity transmission company (report in Spanish).

“Central America Pipeline: Regulatory Analysis and Proposal” (July 28, 1998). This report presents the regulatory analysis and development of a fiscal, legal and commercial framework proposal for gas import, transportation, distribution and marketing in El Salvador, Honduras and Guatemala regarding the proposed Central American Pipeline.

“Energy Regulation in El Salvador” (July 28, 1998). This report presents a deep analysis of the electricity and natural gas regulatory, legal and tax frameworks in El Salvador.

“Energy Regulation in Honduras” (July 28, 1998). This report presents a deep analysis of the electricity and natural gas regulatory, legal and tax frameworks in Honduras.

“Energy Regulation in Guatemala” (July 28, 1998). This report presents a deep analysis of the electricity and natural gas regulatory, legal and tax frameworks in Guatemala.

“The Cost of Capital for Gas Transmission and Distribution Companies in Victoria” (June 22, 1998). Report prepared for BHP Petroleum Pty Ltd.

“Principios Económicos Básicos de Tarificación de Transmisión Eléctrica. Revisión Tarifaria de Transener” (May 26, 1998). The main purpose for this report was to provide an economic and regulatory analysis of laws, decrees, license and documents of the tender to provide advise in the tariff review of Transener (the electricity transmission company in Argentina), to present an economic analysis of transmission tariffs and to provide an opinion on specific topics to be discussed in the public hearing. This report was written for a consortium of generators in Argentina (reports in English and Spanish)

“Asesoría en la Fijación de Tarifas de Transener y Normativa del Transporte, Benchmarking Study” (May 26, 1998). This report compares the costs of Transener (the electricity transmission company in Argentina) with those of other companies elsewhere for a consortium of generators (the electricity transmission company in Argentina).

“International Regulation Tool Kit: Argentina” (March 20, 1998). This document describes the natural gas regulatory framework in Argentina for BG.

RECENT INTERNATIONAL REPORTS (CONT.)

“Tarificación de los Servicios Que Prestan las Terminales de Gas LP” (January 9, 1998). The final report given to PEMEX Gas y Petroquímica Básica (México) for the determination of rates for LPG terminals.

“NERA-Pérez Companc Distribution Tariff Model” (January 5, 1998). This report explains the methodology behind NERA’s calculations of distribution tariffs for Pérez Companc in Monterrey.

“Monterrey Natural Gas Market Assesment,” (January 5, 1998). A series of reports were written to present the results of the market study of the demand for natural gas in the geographic zone of Monterrey to a company interested in bidding for the natural gas distributorship.

“Resolving the Question of Escalation of Phases (bb) and (cc) Under the Maui Gas Sale and Purchase Contract”, prepared for the New Zealand Treasury, December 16, 1997.

“Timetable and Regulatory Review for the Monterrey International Public Tender,” (December 5, 1997). A description of the necessary steps to bid for a distribution company as well as an explanation and analysis of natural regulations in Mexico for Pérez Companc.

“Economic Issues in the PFR for 18.3.1(I)(bb) & (cc)”, prepared for the New Zealand Treasury, November 17, 1997.

“NERA’s Distribution Tariff Model” (October 29, 1997). This report explains the methodology behind NERA’s calculations of distribution tariffs for MetroGas.

“Evaluation Design Standards for MetroGas,” (October 24, 1997). This report dealt with the analytical support resulting from work with MetroGas to create a meticulously-documented security criterion analysis that supported its efforts to obtain due recognition—and appropriate tariff treatment—for its costs.

“Ghana Natural Gas Market Assessment,” prepared for the Ministry of Mines and Energy, Ghana (March-July, 1997). A series of four reports assessing prospective gas demand usage and netback prices for a number of proposed pipeline project alternatives.

“Final Report for Russian Oil Transportation & Export Study: Commercial, Contractual & Regulatory Component,” prepared for The World Bank, June 25, 1997.

Response to FIEL’s criticisms regarding NERA’s report “Cálculo del Factor de Eficiencia (X)” (June 2, 1997).

“Impacts on Pemex of Natural Gas Regulations” prepared for Pemex Gas y Petroquímica Básica México, May 21, 1997.

“Market Models for Victoria’s Gas Industry: A Review of Options,” April 1997, prepared for Broken Hill Proprietary (BHP) Petroleum, to propose an alternative model for gas industry restructuring in Victoria, Australia.

“New Market Arrangements for the Victorian Gas Industry,” prepared for Broken Hill Proprietary Petroleum; March 13, 1997.

“CEG Privatization: Comments to the Regulatory Framework,” prepared for Capitaltec Consultoria Economica SA describing our comments with respect to the regulatory framework and the license proposed in the privatization of Riogas and CEG in Rio de Janeiro, Brazil; March 7, 1997.

“Determination of the Efficiency Factor (X),” prepared for ENARGAS, Argentina, January 24, 1997.

“Determination of Costs and Prices for Natural Gas Transmission,” prepared for Pemex Gas y Petroquímica Básica, México, December 19, 1996.

RECENT INTERNATIONAL REPORTS (CONT.)

“Regulating Argentina’s Gas Industry,” a report prepared for The Ministry of Economy and The World Bank, November 26, 1996.

“Open Access and Regulation,” prepared for Gascor, in the State of Victoria, Australia; (October 2, 1996).

“A Review and Critique of Russian Oil Transportation Tariffs (Russian Oil Transportation & Export Study; Commercial, Contractual & Regulatory Component),” prepared for The World Bank, June 13, 1996.

“Tariff Options for Transneft (Russian Oil Transportation & Export Study; Commercial, Contractual & Regulatory Component),” prepared for The World Bank, June 6, 1996.

“Comments on the Proposed Amendments to the Regulation of Airports in New Zealand,” prepared for the New Zealand Parliament Select Committee hearings on the regulation of monopolies, March 13, 1996.

“Evaluating the Shell Camisea Project,” prepared for Perupetro S.A., Government of Peru, December 8, 1995.

“Towards a Permanent Pricing and Services Regime,” prepared for British Gas, London, England, November, 1995.

“Final Report: Gas Competition in Victoria,” prepared for Gas Industry Reform Unit, Office of State Owned Enterprises, June 1995.

“Natural Gas Tariff Study,” prepared for the World Bank, May 1995, consisting of:

Principles and Tariffs of Open-Access Gas Transportation and Distribution Tariffs
Handbook for Calculating Open-Access Gas Transportation and Distribution Tariffs

“Economic Implications of the Proposed Enerco/Capital Merger,” prepared for Natural Gas Corporation of New Zealand, December 1994.

“Contract Terms and Prices for Transportation and Distribution of Gas in the United States,” prepared for British Gas TransCo, November 1994.

“Economic Issues in Transport Facing British Gas,” prepared for British Gas plc, December 1993.

“Overview of Natural Gas Corporation's Open-Access Gas Tariffs and Contract Proposals,” prepared for Natural Gas Corporation of New Zealand, October 1993.

RECENT SPEECHES

“Role of Yardsticks in Cost & Service Quality Regulation”, Speech to the London Regulated Industries Group, November 30, 2000.

“Natural Gas Issues: Retail Competition, LDC Gas Rate Unbundling, and Performance Based Rates”, presented at the Wisconsin Public Utility Institute, November 17, 2000.

“Performance Based Ratemaking (PBR) in Restructured Markets, Speech to Edison Electric Institute Seminar in San Antonio Texas, April 27, 2000.

“Benchmarking versus Rate Cases and the Half Live of Regulatory Commitment”, Speech given at the Australian Competition & Consumer Commission’s Incentive Regulation and Overseas Development Conference, Sydney, Australia, November 19, 1999.

“Benchmarking, Rate Cases and Regulatory Commitment”, Speech given at the Australian Competition & Consumer Commission’s Incentive Regulation and Overseas Developments Conference, Sydney, Australia, November 14, 1999.

“Gas and Electricity Sector Convergence: Economic Policy Implications”, Presentation at Energy Week '99, “The Global Shakeout”, The World Bank, Washington D.C., April 6-8, 1999.

“Gas and Electricity Sector Convergence: Economic Policy Implications”, Presentation/Training at the Economic Development Institute, The World Bank, Washington D.C., December 8-9, 1998.

“Sustainable Regulation for Russian Oil Pipelines”, Presentation at Pipeline Transportation: A Linkage Between Petroleum Production and Consumers, Moscow, June 25, 1997.

“Rocks on the Road to Effective Regulation”, Presentation to Brazil/US Aspen Global Forum, Aspen, Colorado, December 5-8, 1996.

“Stranded Cost Case Studies in the Gas Industry: Promoting Competition Quickly,” —Speech presented at the MCLE Seminar: Retail Utility Deregulation, Boston, MA, June 17, 1996.

“Why Regulate Anyway? The Tough Search for Business-As-Usual Regulation,”—Panelist at St. Louis 1996, The Fifth Annual DOE-NARUC Natural Gas Conference, St. Louis, Missouri, April 30, 1996.

“Antitrust for Utilities: Treating Them Just Like Everyone Else”—Panelist at St. Louis 1996, The Fifth Annual DOE-NARUC Natural Gas Conference, St. Louis, Missouri, April 29, 1996.

“Natural Gas Pricing: The First Step in Transforming Natural Gas Industries”—One-Day Interactive Workshop on Pricing Strategy at The Future of Natural Gas in the Mediterranean Conference, Milan, Italy, March 27, 1996.

“Open Access in Gas Transmission,”—Speech given at the New England Chapter of the International Association for Energy Economics, Boston, Massachusetts, December 13, 1995.

“Light-Handed Regulation for Interstate Gas Pipelines,”—Speech given at the Twenty-Seventh Annual Institute of Public Utilities Conference, Williamsburg, Virginia, December 12, 1995.

“Ending Cost of Service Ratemaking,”—Speech given to the Electric Industry Restructuring Roundtable, Boston, Massachusetts, October 2, 1995.

“Promoting Markets for Transmission: Economic Engineering or Genuine Competition?”—Speech given at The Forty-Ninth Annual Meeting of the Federal Energy Bar Association, Inc., May 17, 1995.

RECENT SPEECHES (CONT.)

“End-Use Competition Between Gas and Electricity: Problems of Considering Gas and Electric Regulatory Reform Separately,”—Panelist on panel at ORLANDO ‘95, The Fourth Annual DOE-NARUC Natural Gas Conference, Orlando, Florida, February 14, 1995.

“Incremental Pricing: Not a Quantum Leap,”—Speech given at the 1995 Natural Gas Ratemaking Strategies Conference, Houston, Texas, February 3, 1995.

“The Feasibility of Competition in the Interstate Pipeline Market,”—Speech given at the Institute of Public Utilities Twenty-Sixth Annual Conference, Williamsburg, Virginia, December 13, 1994.

“A Mirror on the Evolution of the Gas Industry: The Views from Within the Business and from Abroad,”—Speech given at the 1994 LDC Meeting-ANR Pipeline Company, October 4, 1994.

“Creating New Markets Out of Old Utility Services,” —Speech given at the Fifteenth Annual NERA Santa Fe Antitrust and Trade Regulation Seminar, Santa Fe, New Mexico, July 9, 1994.

“Sources of and Prospects for Privatization in Developed and Underdeveloped Economies,” —Speech given at the Spring Conference of the International Political Economy Concentration and the National Center for International Studies at Columbia University, New York, March 30, 1994.

“Experiencias en el Desarrollo del Mercado de Gas Natural (Experiences in gas market development),” —Speech given at the conference “Perspectivas y Desarrollo de Mercado de Gas Natural,” Centro de Extensión de la Pontificia Universidad Católica de Chile, November 16, 1993.

“The Role of Rate of Return Analysis in a More Progressive Regulatory Environment,”—Speech given at the Twenty-Fifth Financial Forum held by the National Society of Rate of Return Analysts, Philadelphia, Pennsylvania, April 27, 1993.

“Privatization of Energy and Natural Resources,”—Speech given at the International Privatization Conference “Practical Issues and Solutions in the New World Order,” New York, New York, November 20, 1992.

PARTIAL LIST OF CLIENTS SERVED WORLDWIDE**ELECTRIC UTILITY**

Alberta Power Limited
 Atlantic Electric Company
 Boston Edison Company
 Central Hudson Gas and Electric
 Commonwealth Edison Company
 Commonwealth Energy System
 Conowingo Power Company
 Consolidated Edison Company
 Duquesne Light Company
 Green Mountain Power Company
 Long Island Lighting Company
 Nantahala Power Company
 New York State Electric & Gas Corporation

Niagara Mohawk Power
 Ohio Power Company
 Orange & Rockland Utilities
 Pennsylvania Power Company
 Pennsylvania Power and Light Company
 Philadelphia Electric Company
 Portland General Electric Company
 Public Service Company of New Hampshire
 Public Service Company of New Mexico
 Rochester Gas & Electric
 Sierra Pacific Resources
 Tampa Electric Company
 Western Massachusetts Electric Co.
 West Penn Power Company

GAS UTILITY

ARKLA, Inc.
 Atlanta Gas Light Company
 Bay State Gas Company
 Berkshire Gas Company
 Blackstone Gas Company
 Boston Gas Company
 Bristol & Warren Gas Company
 British Gas plc
 Brooklyn Union Gas Company
 Canadian Western Natural Gas
 Chattanooga Gas Company
 Colonial Gas Company
 Commonwealth Gas Company
 Connecticut Natural Gas Corp.
 Consolidated Gas Supply Corp.
 Elizabethtown Gas Company
 Empire State Pipeline Company
 ENAGAS (Spain)
 EnergyNorth, Inc.
 Essex County Gas Company
 Fall River Gas Company
 Fitchburg Gas & Electric Light Company

Gas and Fuel Corporation of Victoria
 Granite State Gas Transmission, Inc.
 Great Falls Gas Company
 Holyoke, Mass. Gas & Electric Dept.
 ICG Utilities (Ontario) Ltd.
 KN Energy, Inc.
 Middleborough Municipal Gas & Electric
 National Fuel Gas Distribution Corp.
 Natural Gas Corporation of New Zealand
 Natural Gas Pipeline of America
 Norwich Department of Public Utilities
 Pacific Gas Transmission
 Pemex Gas y Petroquímica Básica
 Pennsylvania Gas and Water Company
 Peoples Gas Light and Coke Company
 Providence Gas Company
 Southern Connecticut Gas Company
 Southwest Gas Corporation
 Transwestern Pipeline Company
 Valley Gas Company
 Washington Gas Light Company
 Westfield Gas & Electric Light Dept.
 Wisconsin Gas Company
 Yankee Gas Services Company

TELEPHONE UTILITY

Centel Corporation
 Continental Telephone Company of Illinois

General Telephone of Pennsylvania
 General Telephone Company of Ohio
 Pacific Bell Telephone Company

PARTIAL LIST OF CLIENTS SERVED WORLDWIDE (Cont'd.)**REGULATORY AND GOVERNMENT**

Delaware Public Service Commission

re: Delmarva Power & Light Company

District of Columbia Public Service Commission

re: Potomac Electric Power Company
Washington Gas Light Company

Massachusetts Municipal Wholesale Electric Company

The Government of Chile

Gas industry regulations

The Government of Argentina

Plan for privatized rail freight industry regulation

The Government of Tanzania

Natural gas development and regulation plan for Songo Songo Island gas reserves.

Financing the development of gas reserves on Songo Songo Island with emphasis on payment guarantee mechanisms for foreign exchange.

The World Bank

re: Natural gas tariffs for Polskie Gornictwo Naftowe i Gazownictwo
(The Polish Oil and Gas Company)

re: Natural gas transport and distribution tariffs for Gas del Estado
(The Argentine State-owned gas utility)

re: Natural gas development for the Moroccan Gas System.

re: Natural gas transport and distribution tariffs for the Bolivian Gas Industry.

re: Natural gas development plan for Sichuan province of China.

OTHER

Air New Zealand

BHP Petroleum Pty Ltd

Centel Corporation

General Electric Company

Intel Corporation

Jamaica Water Supply Company

Nucor Steel Corporation

Parsons Brinckerhoff Development Group

**MEMBERSHIP IN
PROFESSIONAL ORGANIZATIONS**

The American Economic Association

October 2000