

## STEVEN L. ESTOMIN

Dr. Estomin is a principal in Exeter Associates, Inc. He is a senior economist whose academic training and professional experience are in the areas of microeconomic applications, industry analysis, econometric modeling and environmental economics. At Exeter, Dr. Estomin specializes in power supply procurement, utility load forecasting, regulatory policy, options analysis, utility contract negotiation, and issues of competition, antitrust, and damage estimation.

Dr. Estomin has testified on issues related to load forecasting, statistical analysis, economic damage analysis, class cost-of-service, rate design, power supply procurement, and default electric service. He has prepared numerous electric load forecasts and has directed projects for state and federal regulatory agencies. Dr. Estomin has prepared reports on load forecasting, energy conservation, alternative power supply procurement, bulk power supply planning, and damage estimations for federal and state agencies and for private firms. He has also provided technical support to federal agencies in utility contract negotiations and in the development of requests for proposals for competitive power supply procurement.

### Education:

B.A. (Economics) - University of Maryland, 1975.

M.A. (Economics) - University of Maryland, 1978.

Ph.D. (Economics) - University of Maryland, 1986.

### Previous Employment:

1980-1981 - Faculty Researcher, Bureau of Business and Economic Research, University of Maryland, College Park, Maryland.

1976-1980 - Research/Teaching Assistant, and Instructor, University of Maryland, Department of Economics, College Park, Maryland.

1976-1978 - Economist, U.S. Department of Labor, Bureau of International Labor Affairs, Office of Trade Adjustment Assistance, Washington, D.C.

### Professional Work:

At the Bureau of Business and Economic Research, Dr. Estomin supervised the development of an environmental pollution forecasting model which he linked to a county level regional economic model. This task included developing submodels for industrial/commercial activity, municipal wastes generation, and transportation and energy-related emissions. Several reports and estimations using the model were provided to the Bureau of Land Management (U.S. Department of the Interior) and were used to develop analyses of future development of the outer-continental shelf.

As a Graduate Teaching Assistant for the Department of Economics at the University of Maryland, Dr. Estomin was initially engaged in aiding senior faculty members in a variety of teaching-related tasks and later autonomously taught micro and macroeconomic theory courses. As an Instructor for the University, he taught upper-level courses in the economics of poverty and discrimination and the economics of American industry. As a Graduate Research Assistant, Dr. Estomin conducted extensive research in pollution abatement cost modeling.

At the U.S. Department of Labor, Dr. Estomin collected firm-specific data covering sales, inventory, employment, and production and used these data together with industry production, employment, and import data to analyze causes of employment reductions. Companies analyzed by Dr. Estomin include American Motors Corporation, Bethlehem Steel, and numerous smaller firms.

### Major Publications and Reports:

“Maryland Power Plants and the Environment: A Review of the Impacts of Power Plants and Transmission Lines on Maryland’s Natural Resources, Maryland Power Plant Research Program, PPRP-CEIR-14,” January 2008 (with Christina Mudd and Sari Fink of Exeter Associates, Inc. and contributing authors from Versar, Inc. and Environmental Resources Management).

“Forecasted Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, November 2006 (with David Chen and Michael P. Lee).

“Maryland’s Options to Reduce and Stabilize Electric Power Prices Following Restructuring,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, September 2006 (with Matthew I. Kahal).

“The Potential for Biomass Co-Firing in Maryland,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program, March 2006 (with Christina Mudd and Michael Lee).

- “Wind Power Options Assessment,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program and the Maryland Energy Administration, January 2006 (with Matthew I. Kahal and Christina Mudd).
- “Electric Power Supply Options for Holloman Air Force Base, New Mexico,” prepared for the U.S. Air Force, Air Force Civil Engineer Support Agency, September 2005.
- “Forecast of Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Economic Analysis of a Power Plant Fueled by Poultry Litter to be Located on Maryland’s Eastern Shore,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Yucca Mountain Project – Evaluating Alternative Electric Power Service Options,” prepared for the U.S. Department of Energy, Federal Energy Management Program, August 2004.
- “Short-term Steam Supply options for the Savannah River Site,” prepared for the U.S. Department of Energy, Federal Energy Management Program, June 2004.
- “Assessment of Economic Damages,” prepared for Supra Telecommunications and Information Systems, Inc., CPR Institute for Arbitral Tribunal, Supra Telecommunications and Information Systems v. BellSouth Telecommunications, Arbitration V, October 2003 (with Marvin H. Kahn).
- “Costs and Benefits for Overhead/Underground Utilities,” prepared for the Maryland State Highway Administration, October 2003 (with William H. Albeck).
- “Economic Assessment of Damages,” prepared for Supra Telecommunications and Information Systems, Inc., U.S. District Court, Southern District of Florida, Case No. 99-1706, March 2003 (with Marvin H. Kahn).
- “Forecasted Electric Energy Consumption and Peak Demand in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, October 2002.
- “The Technical Potential for Electric Energy Conservation in Maine,” prepared for the Maine Office of Consumer Advocate, September 2002.
- “Energy Conservation and Efficiency Baseline,” prepared for Governor Paris N. Glendening’s Task Force on Energy Conservation and Efficiency, the Maryland Energy Administration, and the Maryland Department of Natural Resources, December 2001 (with Allan R. Evans and Michael P. Lee).

- “Alternative Electricity and Natural Gas Procurement Strategies for U.S. Department of Defense Installations,” prepared for the U.S. Department of Defense, Defense Logistics Agency, Defense Energy Support Center, July 2001 (with Richard A. Galligan).
- “Electricity in Maryland Fact Book,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, January 2001.
- “Steam Supply Options Analysis for the Savannah River Site,” prepared for the U.S. Department of Energy, March 2000.
- “The Feasibility of a Renewables Portfolio Standard in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, January 2000.
- “Undergrounding Electric Utility Lines in Maryland,” prepared for the Maryland Energy Administration and the Power Plant Research Program, Maryland Department of Natural Resources for the Governor’s Task Force on Utility Preparedness, December 1999.
- “Nevada Test Site Utility Options Study,” prepared for the U.S. Department of Energy, June 1999.
- “Spallation Neutron Source Electrical Facilities Study,” prepared for the U.S. Department of Energy, April 1999.
- “Forecasted Electric Power Demands for the Delmarva Power and Light Company,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 1998 (with Andrés Escalante).
- “Assessment of DOD Electric Power Supply Options, Strategies, and Costs under Retail Open Access,” prepared for the U.S. Department of Defense, Office of the Deputy Under Secretary of Defense, February 1998.
- “The Engineering and Economic Feasibility of Using Poultry Litter as a Fuel to Generate Electric Power at Maryland’s Eastern Correctional Institute,” prepared for the Maryland Environmental Service, February 1998 (with Gary Walters).
- “Power Supply and Cogeneration Options for the Eastern Correctional Institute,” prepared for the Maryland Environmental Service,” April 1997 (with Thomas King, P.E.)
- “Cooperative Integrated Resource Plan for U.S. Department of Energy Installations Having Power Allocations from the Western Area Power Administration,” prepared for the U.S. Department of Energy, June 1997.
- “Cooperative Integrated Resource Plan for U.S. Navy Installations Having Power Allocations from the Western Area Power Administration,” prepared for the U.S. Navy, SOUTHWESTNAVFACENGDIV, June 1997.

- “Cooperative Integrated Resource Plan for U.S. Air Force Installations Having Power Allocations from the Western Area Power Administration,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), June 1997.
- “Analysis of Service Reliability -- Duquesne Light Company,” prepared for the Pennsylvania Office of Consumer Advocate, June 1997.
- “Estimated Power Supply Costs for the Accelerator Production of Tritium Project,” prepared for the U.S. Department of Energy, Office of Project and Fixed Asset Management, October 1996.
- “Customized Energy Conservation and Demand-Side Management Agreements between U.S. Air Force Bases and Utility Service Suppliers,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), January 1996 (with Richard I. Chais).
- “Evaluating and Implementing Privatization of Utility Distribution Systems at U.S. Air Force Bases,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), December 1995 (with Richard I. Chais).
- “Power Supply Options Study for Vandenberg Air Force Base,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base), December 1995 (with Richard Zumwalt, P.E.).
- “U.S. Department of Energy Savannah River Site Power System Privatization Study,” prepared for the U.S. Department of Energy, February 1995 (with Richard Zumwalt).
- “Technical Report: Special Study of the MacDill Cogeneration Project,” prepared for the Department of the Air Force, Headquarters Air Combat Command, May 1994.
- “The Feasibility of Centralized Purchase of Electric Utility Service,” prepared for the Department of the Air Force, March 1994.
- “Long Range Energy Requirements for Charleston Air Force Base,” (two volumes), prepared for the Department of the Air Force, July 1994.
- “Long Range Energy Requirements for Wright-Patterson Air Force Base,” (three volumes) prepared for the Department of the Air Force, Headquarters Air Force Logistics Command, April 1993.
- “Forecasted Electric Power Demands for the Potomac Electric Power Company,” (two volumes), prepared for the Power Plant Research Division, Maryland Department of Natural Resources, March 1992 (with John E. Beach).
- “Optimal Allocation of Western Area Power Administration (Billings Area) Federal Preference Power Among Ellsworth, Minot, and Offutt Air Force Bases,” prepared for the U.S. Air Force, November 1991.

- “Impacts of Missile Site Deactivation on Electric Power Costs,” *Environmental Impact Statement -- Deactivation of the Minuteman II Missile Wing at Ellsworth Air Force Base, South Dakota*, prepared for the Department of the Air Force, Headquarters Strategic Air Command, October 1991.
- “Forecasted Electric Power Demands for the Baltimore Gas and Electric Company,” (two volumes), prepared for the Power Plant and Environmental Review Division, Maryland Department of Natural Resources, May 1991 (with John E. Beach).
- “Forecasted Electric Power Demands for the Delmarva Power and Light Company,” (two volumes), prepared for the Power Plant and Environmental Review Division, Maryland Department of Natural Resources, September 1990 (with John E. Beach).
- “Year 2000 Power Supply Reliability Assessment: SERC and SPP Regions,” prepared for the U.S. Air Force, August 1990 (with Dennis Goins).
- “Market and Regulatory Effects of the Elimination of the Manufacturing Restriction on the Regional Bell Operating Companies,” prepared for the Telecommunications Committee of the National Association of State Utility Consumer Advocates (NASUCA), November 1989.
- “Alternative Electric Power Supply Sources for Onizuka Air Force Base, California,” prepared for the U.S. Air Force, June 1989.
- “Vandenberg Air Force Base Power Supply Study,” prepared for the U.S. Air Force, March 1989.
- “Forecasted Electric Power Demands for the Potomac Electric Power Company,” (two volumes), prepared for the Power Plant Research Program, Maryland Department of Natural Resources, July 1988 (with Walter Asmuth, III).
- “Economic Damage Estimation -- Pittcon Industries, Inc.,” Exeter Associates, Inc., prepared for Pittcon Industries, Inc., February 1988 (with Marvin H. Kahn).
- “Report and Recommendations of the U.S. Air Force on Adjustments to the Mather AFB Surcharge,” prepared for the U.S. Air Force for submission to the Board of Directors of the Sacramento Municipal Utility District, August 1987.
- “Preliminary Assessment of Options Available to the U.S. Air Force to Reduce Electric Power and Energy Costs to the Northern California Air Force Bases,” Exeter Associates, Inc., prepared for the U.S. Air Force, March 1987.
- “An Analysis of the Optimal Allocation of Available Western Area Power Administration Preference Power Among the Northern California Air Force Bases,” Exeter Associates, Inc., prepared for the U.S. Air Force, March 1987.

“A Survey of Methods Used to Estimate Conservation Potential,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, February 1987.

“End-Use Forecasting,” presentation at the Power Plant Research Program Load Forecasting Workshop, Annapolis, Maryland, January 1987 (published in proceedings volume).

“Survey and Analysis of End-Use Modeling Practices,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, October 1986.

“Economic Damage Estimation -- Yacht Buyers Group,” Exeter Associates, Inc., prepared for Yacht Buyers Group, Inc., August 1986 (with Marvin H. Kahn).

“Updated Load Forecast of Energy and Peak Demand for the Allegheny Power System,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, June 1986 (with Matthew I. Kahal).

*The Determinants of Profitability and Premiums in Conglomerate Mergers*, Ph.D. dissertation, University of Maryland, 1986.

“Updated Load Forecast of Energy and Peak Demand on the Delmarva Peninsula,” Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, February 1986 (with Matthew I. Kahal).

“Estimated Value of Experimental Breeder Reactor II Generation to the Idaho National Engineering Laboratory -- 1985 Through 1986,” Exeter Associates, Inc., prepared for the Idaho National Engineering Laboratory, U.S. Department of Energy, January 1986.

“An Economic Estimation of Electric Power Demands for the Baltimore Gas and Electric Company,” (two volumes), Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, April 1985 (with Matthew I. Kahal).

“An Assessment of the State-of-the-Art of Gas Utility Load Forecasting,” (with Thomas Bacon, Jr. and Matthew I. Kahal) published in the *Proceedings of the Fourth NARUC Biennial Regulatory Information Conference*, 1984.

“Projected Electric Power Demands for the Potomac Electric Power Company,” (three volumes), Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, March 1984 (with Matthew I. Kahal).

“Economic and Demographic Forecasts for the PEPCO Service Area,” Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, September 1982.

“The Behavior of Regulatory Agencies,” published in *Attacking Regulatory Problems: An Agenda for Research in the 1980's*. (Allen Furgeson, ed.), Ballinger Publishers, Cambridge, Massachusetts, 1981 (with Wes Magat).

“Report on the Environmental Impacts from Outer-Continental Shelf Development in the Baltimore Canyon,” Bureau of Business and Economic Research, University of Maryland, prepared for the Bureau of Land Management, U.S. Department of the Interior, September 1980 (with Virginia McConnell).

“The Environmental Systems Model,” Bureau of Business and Economic Research, University of Maryland, June 1980 (with Virginia McConnell).

“Economic-Environmental Models of Regional Development -- The U.S. Experience,” Department of Economics Working Paper 80-15, University of Maryland, November 1979 (with John H. Cumberland and Alan Krupnick).

Expert Testimony Presented:

Before the Pennsylvania Public Utility Commission in Docket No. P-0072305, Pennsylvania Power Company, 2007, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Public Service Commission in Case No. 9099, Baltimore Gas and Electric Company, 2007, for the Maryland Department of Natural Resources. Testified on market-related issues, Standard Offer Service prices, and Standard Offer Service Procurement Issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00662227, PPL Electric Utilities Corporation, 2006, for the Pennsylvania Office of Consumer Advocate. Testified of Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9063, Investigation into the Optimal Structure of the Electric Utility Industry in Maryland, 2006, for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration. Testified on standard offer service issues, customer choice, demand-side management and energy efficiency, and market-related issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00052188, Pennsylvania Power Company, 2005, for the Pennsylvania Office of Consumer Advocate. Testified on Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9018, Potomac Edison Company, 2005, for the Maryland Department of Natural Resources, Power Plant Research Program. Testified on jurisdictional cost impacts of proposed transmission and distribution facilities.

Before the Maine Public Utilities Commission in Docket No. 2004-339, Central Maine Power Company, 2004, for the Maine Public Advocate. Testified on sales forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2002-770, Central Maine Power Company, 2003, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-239, Bangor Hydro Electric Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-232, Central Maine Power Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Kentucky Public Service Commission in Case No. 99-070, Western Kentucky Gas Company, 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Kentucky Public Service Commission in Case No. 99-176, Delta Natural Gas Company, Inc., 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Maine Public Utilities Commission in Docket No. 97-580, Central Maine Power Company, 1998, for the MPUC Staff. Testified on generation-related administrative and general expenses.

Before the Maine Public Utilities Commission in Docket No. 96-116, Bangor Hydro Electric Company, 1997, for the MPUC Staff. Testified on load forecasting issues.

Before the New Mexico Public Service Commission, El Paso Electric Company, 1996, for the U.S. Air Force. Testified on rate design issues.

Before the State of Rhode Island and Providence Plantation Public Utilities Commission in Docket No. 2290, Narragansett Electric Company, 1995, for the Division of Public Utilities and Carriers. Testified on load forecasting issues.

Before the Illinois Commerce Commission in Docket No. 94-0065, Commonwealth Edison Company, June 1994, for the U.S. Department of Energy. Testified on load forecasting.

Before the Federal Energy Regulatory Commission in Docket No. RP91-203, et al., Tennessee Gas Pipeline Company, May 1994, for the Tennessee Rate Design Customer Group. Testified on issues related to econometric analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 926, Chesapeake and Potomac Telephone Company, September 1993, for the Office of People's Counsel. Testified on issues related to finance and statistical analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 814, Phase III, Chesapeake and Potomac Telephone Company, October 1992, for the Office of People's Counsel. Testified on issues related to competition in the telecommunications industry.

Before the Maine Public Utilities Commission in Docket No. 92-101, Maine Public Service Company, September 1992, for the Commission Staff. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8413, Potomac Electric Power Company, March 1992, for the Maryland Power Plant Research Division. Testified on load forecasting.

Before the State of New Jersey Board of Regulatory Commissioners in Docket No. GF91081393J, New Jersey Natural Gas Company, March 1992, for the Division of Rate Counsel. Testified on weather normalization.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 2019, Narragansett Electric Company, November 1991, for the Division of Public Utilities and Carriers. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 91-010, Bangor Hydro-Electric Company, June 1991, for the Maine Public Advocate. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8241, Phase II, Baltimore Gas and Electric Company, May 1991, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 1976, Narragansett Electric Company, October 1990, for the Revision of Public Utilities and Carriers. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8201, Delmarva Power and Light Company, October 1990, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 90-076, Central Maine Power Company, September 1990, for the Maine Public Advocate. Testified on load forecasting.

Before the Public Service Commission of the District of Columbia in Formal Case No. 890, District of Columbia Natural Gas, February 1990, for the Office of People's Counsel of the District of Columbia. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8102, Southern Maryland Cooperative, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8063 Phase II, Potomac Electric Power Company, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the U.S. District Court for the Eastern District of Pennsylvania in Civil Action No. 87-0805, March 1988, for Pittcon Industries, Inc. Testified on economic damages.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on the applicability and appropriate calculation of a special surcharge.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on cost estimation and cost allocation.

Before the Sacramento Municipal Utility District Board, February 1987, for the U.S. Air Force. Testified on rate design and cogeneration.

Before the Vermont Public Service Board in Docket No. 4661, Green Mountain Power Corporation, November 1982, for the Vermont Department of Public Service. Testified on production planning, fuel costs, and maintenance scheduling for nuclear plant on behalf of the Vermont Public Service Board.