

CHRISTINA R. MUDD

Ms. Mudd is a senior analyst at Exeter Associates, Inc. with over 15 years experience in energy efficiency, renewable energy, and climate change policy. With Exeter Ms. Mudd provides detailed analysis on the economic impacts of energy and environmental policies. She also provides technical support to state and federal agencies by reviewing utility supply contracts and rates, reviewing the economic feasibility of alternative energy projects, and exploring regulatory and policy options to expand the use of energy efficient technologies and distributed resources.

In 2008, Ms. Mudd was appointed to a one-year term to the Howard County Commission on Sustainability and the Environment by County Executive Ken Ulman, where she serves as the Chair of the Howard County Energy Task Force.

Christina previously worked as a Senior Associate for Hagler Bailly, Inc., working under contract to USAID, providing technical support to developing countries. Under contract to USAID Ms. Mudd examined the application of market-based instruments for purposes of reducing greenhouse gas emissions and mitigating other environmental impacts in the Philippines, India, and Indonesia. Ms. Mudd also worked in Mexico, establishing comprehensive environmental and energy efficiency programs for the reduction of greenhouse gas emissions.

Education:

B.S. Political Science and Biology, James Madison University, Harrisonburg, VA, 1992

M.A. International Affairs: Concentration in Economics and Energy Policy, Johns Hopkins University, Paul H. Nitze School for Advanced International Studies (SAIS), Washington, D.C., 1998

Previous Employment:

2000-2004 Assistant Director/Policy Analyst
Maryland Energy Administration
Annapolis, MD

1998-2000 Senior Associate
PHB – Hagler Bailly (now PA Consulting, Inc.)
Arlington, VA

1997-1998 Associate (part-time)
Louis Berger International, Inc.
Washington, D.C.

1992-1996 Program Manager
Maryland International Center (World Trade Center Institute)
Baltimore, MD

Professional Work Experience:

Ms. Mudd's work at Exeter Associates, Inc. is primarily related to the analysis of state regulatory and legislative policies for the development of renewable resources, the expansion of energy efficiency and conservation, and the use of distributed resources. She also has considerable experience with the analysis of climate change mitigation strategies, including the evaluation of various benefits-costs assessments and the Regional Greenhouse Gas Initiative. She routinely prepares briefing memorandums for state government officials on regulatory proceedings, legislative initiatives, and technical issues and has authored many reports and research papers at the request of state clients.

Ms. Mudd assists the Maryland Department of Natural Resources, Maryland Energy Administration and Maryland Department of Environment reviewing policies and programs related to electricity regulation, energy efficiency, renewable energy, and climate change. She is familiar with regulatory proceedings of the Federal Energy Regulatory Commission as well as the operation of markets in the PJM Interconnection.

Through a contract between Exeter Associates and the National Association of Regulatory Utility Commissioners, Ms. Mudd served as the Executive Director for the National Council on Electricity Policy, a joint venture between the National Association of Regulatory Utility Commissioners (NARUC), the National Association of State Energy Officials (NASEO), the National Conference of State Legislatures (NCSL), National Association of Clean Air Agencies (NACAA) and the National Governors Association (NGA). In this capacity, Ms. Mudd facilitated meetings, workshops and teleconferences on subjects related to state electricity policy and regulation. Ms. Mudd also represented the National Council and its members on the National Action Plan on Energy Efficiency, a private-public initiative begun in the fall of 2005 to create a sustainable, aggressive national commitment to energy efficiency through the collaborative efforts of gas and electric utilities, utility regulators, and other partner organizations.

In addition to her work with state government officials, Ms. Mudd has also conducted several energy supply options studies while at Exeter Associates. Specifically, she provided detailed assessments and reviews of energy supply contracts and procurement strategies for several U.S. Air Force bases in an effort to identify areas for potential utility cost savings. Similarly, she has analyzed and reviewed the various power supply options available to several U.S. Department of Energy Installations and National Laboratories.

At the Maryland Energy Administration, Ms. Mudd advised the Director and the Governor's Office on policy issues concerning greenhouse gas emissions, energy efficiency, and renewable energy. She coordinated the Maryland Interstate Agency Working Group on Climate Change, Maryland's first multi-agency effort addressing the issue of Climate Change, and contributed to and oversaw the development of the *GHG Emissions Reductions in Maryland, Volume I: Current State Government Activities, and Volume II: Maryland Climate Change Action Plan*. She also provided analysis to Legislative Services and members of the General Assembly as well as

providing technical support during briefings and hearings. Furthermore, Ms. Mudd was responsible for managing State programs on energy efficiency and conservation for the industrial, commercial, and transportation sectors. Ms. Mudd developed proposals and managed contracts between the State and the US Department of Energy and US Environmental Protection Agency. She also managed a small staff for the implementation of the activities related to DOE's Industries of the Future, Clean Cities, Green Building, Biomass, and Distributed Energy Resources programs. Ms. Mudd helped to establish the Maryland Combined Heat and Power Application Center at the University of Maryland, creating strategic partnerships and identifying sources of funding; and she arranged for Maryland's participation in the DOE-funded Midwest Regional Carbon Sequestration Partnership.

While with PHB Hagler Bailly (now known as PA Consulting), Ms. Mudd conducted several market studies on distributed energy resources and energy efficiency, including the expected technology development timelines, price comparisons, efficiency comparisons, and commercial applications. Ms. Mudd worked with government officials in Mexico City to adopt a process for identifying and analyzing energy efficiency projects. She also helped to conduct a full environmental review for Indonesia as a precursor to a national environmental strategy, and examined the potential impact of privatization and restructuring of electric utilities on the environment in Asia and Latin America.

At Louis Berger International, Ms. Mudd worked on behalf of the United States Asia Environmental Partnership, a project funded by the U.S. Agency for International Development and intended to encourage energy efficiency and pollution prevention in ten Asian countries. Ms. Mudd also coordinated research for best practices in environmental management, including the application of ISO 14001 as a certification tool.

Ms. Mudd began her professional career designing training and exchange programs at the Maryland International Center (World Trade Center Institute) in Baltimore. She managed contracts with the U.S. Agency for International Development, the U.S. Trade and Development Authority, and the U.S. Information Agency, and developed and managed programs focused on environmental management, energy management, and government policy. She organized several training programs specifically related to the development of waste-to-energy projects and worked closely with the Maryland Department of Business and Economic Development (at that time the Department of Employment and Economic Development), and the Baltimore Development Corporation. While with the Maryland International Center Ms. Mudd developed proposals and was awarded nearly \$1 million in grants and contracts over the 5-year period of her employment.

Publications and Consulting Reports:

- “Report on Distributed Generation in Maryland.” Prepared for the Maryland Power Plant Research Program, November 2008. (With Sari Fink.)
- “PPRP Analysis in Support of the Regional Greenhouse Gas Initiative: Study Compendium.” Prepared for the Maryland Power Plant Research Program, October 2008. A Compendium of twelve technical briefs, of which five were authored by Christina Mudd.
- “Generation Interconnection Policies and Wind Power.” (Draft Report) Prepared for the National Renewable Laboratory, U.S. Department of Energy, September 2008. (With Kevin Porter, Jennifer DeCesaro, and Sari Fink.)
- “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 Steven Estomin and Sari Fink, of Exeter Associates and contributing authors from Environmental Resources Management, and Versar, Inc.)
- “The International Experience with Variable Renewable Energy Generation.” Prepared for the California Energy Commission, PIER Renewable Energy Technologies Program. February 2007 (With Kevin Porter and Michelle Weisburger.)
- “State And Regional Policies that Encourage Utility Energy Efficiency Programs: Study Pursuant to Section 139(a) of the Energy Policy Act of 2005.” Prepared for the National Association of Regulatory Utility Commissioners and the National Association of State Energy Officers in support of the U.S. Department of Energy's Report to Congress. July 2006. (with Lowell Unger, Alliance to Save Energy; Rich Sedano, Regulatory Assistance Project; and Kevin Porter)
- “Inventory and Analysis of Combined Heat and Power Systems in Maryland.” Prepared for the Maryland Power Plant Research Program, April 2006. (With Michael P. Lee)
- “Inventory of Renewable Energy Resources Eligible for the Maryland Renewable Energy Portfolio Standard,” Prepared for the Maryland Power Plant Research Program, March 2006 (with Jim McVeigh, Joseph Cohen, Kevin Porter and Michael Lee)
- “The Potential for Biomass Cofiring in Maryland,” prepared for the Maryland Power Plant Assessment Division, March 2006. (With Steven Estomin and Michael Lee)
- “Wind Power Options Assessment.” Prepared for the Maryland Power Plant Research Program and the Maryland Energy Administration, January 2006. (With Matthew Kahal and Steven Estomin.)

- “Environmental Review Report INGENCO Wholesale Power, LLC Landfill Gas-to-Energy Project Newland Park Landfill Wicomico County, Maryland.” Environmental Resources Management, Inc., Versar, Inc., Metametrics, Inc., and Exeter Associates, Inc., PPSE-NPL-01, January 2006. (With Tom Weissinger, P.E., Robert Sawyer, Daniel Goldstein, P.E. Robert Keating, Fred Kelley, and Peter Hall)
- “Methods of Green Power Acquisition for State Government,” prepared for the Maryland Power Plant Assessment Division, December 2004.
- “Economic Analysis of a Power Plant Fueled by Poultry Litter to be Located on Maryland’s Eastern Shore,” prepared for the Maryland Power Plant Assessment Division, December 2004.
- “Idaho National Engineering and Environmental Laboratory Electric Power Supply Options Study,” prepared for the U.S. DOE, Federal Energy Management Program, November 2004.
- “Assessment of Post-2004 Western Area Power Administration Federal Preference Power Entitlements for the Northern California Air Force Installations,” prepared for the Air Force Civil Engineering Support Agency, June 2004.
- “An Initial View on Methodologies for Emission Baselines: Energy Efficiency Case Study” prepared for the Organization for Economic Co-Operation and Development (OECD) and the International Energy Agency, June 2000. (With Dan Violette and Marshall Kneipp)
- “Hanford 1100 Area Case Study” prepared for the Superfund Redevelopment Program of the U.S. Environmental Protection Agency, February 2000.
- “Analysis of Privatization Methods in the Electricity Sector,” prepared for USAID, October 1999. (With Keith Kozloff and Shvetank Shah)
- “Environmental Markets in the Andean Region (Bolivia, Ecuador and Peru),” prepared for USAID, August 1999. (With Elizabeth Marcotte)
- “Indonesia Environmental Management Country Strategy,” prepared for the Asian Development Bank, December 1998. (With Elizabeth Marcotte)
- “Gap Analysis of Corporate Environmental Management Policy and the ISO 14001 Standard for Environmental Management,” prepared for a Fortune 500 Multi-National OEM, November 1998. (With Amit Dalal)