

**SUSAN F. TIERNEY, Ph.D.**  
**Managing Principal**

Phone: 617-425-8114

Fax: 617-425-8001

[stierney@analysisgroup.com](mailto:stierney@analysisgroup.com)

111 Huntington Avenue

Tenth Floor

Boston, MA 02199

Dr. Tierney, a Managing Principal at Analysis Group, is an expert on energy economics, regulation and policy, particularly in the electric and gas industries. She has consulted to business, industry, government, and other organizations on energy markets, economic and environmental regulation and strategy, and energy facility projects. Her expert witness, business consulting and arbitration services have involved market analyses, wholesale and retail market design, contract disputes, resource planning and analysis, asset valuations, regional transmission organizations, the siting of generation and transmission and natural gas pipeline projects, natural gas markets and policy, competitive power procurement design and monitoring, electric system reliability, ratemaking policy, energy efficiency and renewables, climate change policy, and other environmental policy and regulation. She has participated as an expert and advisor in civil litigation cases, regulatory proceedings before state and federal agencies, arbitrations, negotiations, mediations, and business consulting engagements.

Prior to joining Analysis Group, she was Senior Vice President at Lexecon. She also served as the Assistant Secretary for Policy at the U.S. Department of Energy. Previously, she was the Secretary for Environmental Affairs in Massachusetts, Commissioner at the Massachusetts Department of Public Utilities, Chairman of the Board of the Massachusetts Water Resources Authority, and executive director of the Massachusetts Energy Facilities Siting Council. She chairs the Massachusetts Oceans Advisory Commission. She co-chaired the Department of Energy Agency Review Team for the Obama/Biden Presidential Transition Team. She is a member of the U.S. Secretary of Energy Advisory Board, where she serves on its Shale Gas Subcommittee.

Dr. Tierney has authored numerous articles and speaks frequently at industry conferences. She serves on a number of boards of directors and advisory committees, including recently chairing the Policy Subgroup of the National Petroleum Council's study of the natural gas and oil resource base in North America. She chairs the External Advisory Council of the National Renewable Energy Laboratory (NREL). She is also a director of EnerNOC, Inc. She is a director of the World Resources Institute, Clean Air – Cool Planet, the Clean Air Task Force, and the Alliance to Save Energy; and is a member of the Bipartisan Policy Center's Energy Project, the National Petroleum Council. She is a member of the China Sustainable Energy Program's Policy Advisory Council and of the Environmental Advisory Council of the New York Independent System Operator. Previously, she chaired the board of the Energy Foundation; co-chaired the National Commission on Energy Policy; was chair of the Electricity Innovations Institute; was formerly a director of Evergreen Solar, Inc., of Ze-gen, Inc., of Catalytica Energy Systems Inc., of the Electric Power Research Institute; and was a member of the Advisory Council of the New England Independent System Operator and the Massachusetts Renewable Energy Trust Advisory Council. She has taught at the Department of Urban Studies and Planning at MIT, and at the University of California at Irvine. She earned her Ph.D. and M.A. degrees in regional planning at Cornell University and her B.A. at Scripps College.

**EDUCATION**

- 1980 Ph.D. in Regional Planning, Public Policy, Cornell University, Ithaca, NY  
*Dissertation: Congressional policy making on energy policy issues*
- 1976 M.A., in Regional Planning, Public Policy, Cornell University, Ithaca, NY
- 1973 B.A. in Art History, Scripps College, Claremont, CA
- 1971-72 Studied political science, L'Institut d'Etudes Politiques, Paris, France

**PROFESSIONAL EXPERIENCE**

- 2003-present Analysis Group, Inc., Boston, MA  
*Managing Principal*
- 1999-2003 Lexecon, Inc., Cambridge, MA (formerly The Economics Resource Group, Inc.)  
*Senior Vice President*
- 1995-1999 Economics Resource Group, Inc., Cambridge, MA  
*Principal and Managing Consultant*
- 1993-1995 U.S. Department of Energy, Washington, DC  
*Assistant Secretary for Policy*
- 1991-1993 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Boston  
*Secretary of Environmental Affairs*
- 1988-1991 Commonwealth of Massachusetts, Department of Public Utilities, Boston, MA  
*Commissioner*
- 1984-1988 Commonwealth of Massachusetts, Energy Facilities Siting Council, Boston, MA  
*Executive Director*
- 1983-1984 Commonwealth of Massachusetts, Executive Office of Energy Resources, Boston, MA  
*Senior Economist*
- 1982-1983 Commonwealth of Massachusetts, Energy Facilities Siting Council, Boston, MA  
*Policy Analyst*
- 1982 National Academy of Sciences, Washington, DC  
*Researcher*
- 1978-1982 University of California at Irvine, Irvine, CA  
*Assistant Professor*

## SELECTED CONSULTING EXPERIENCE

- **Various confidential engagements** involving power sales agreements, gas supply contracts, advisory services on gas and electric matters, oil market issues, water utility issues, and market power and monitoring issues.
- **COMPETE Coalition**  
Testimony on energy efficiency as part of the performance of state and wholesale electric markets in New Jersey. (2011)
- **Compressed Air Energy Storage Company**  
Confidential engagement to analyze regional wholesale markets for baseload and renewable energy power generation. (2011)
- **Merck Family Foundation**  
Analysis of the economic impacts of the funds collected through the auction of allowances under the Regional Greenhouse Gas Initiative. (2011)
- **American Clean Skies Foundation Corporation**  
Analysis of the reliability and air emission issues associated with potential retirement of the Potomac River Generating Station. (2011)
- **Colorado Public Utilities Commission**  
Analysis of the Colorado solar photovoltaic incentive program. (2011)
- **Exelon Corporation and Constellation Energy (Baltimore Gas & Electric)**  
Analysis of the economic impacts on the Maryland economy associated with the proposed clean-energy commitments tied to the proposed merger of Exelon and Constellation Energy. (2011-2012)
- **New England Power Generators Association**  
Analysis of competition issues associated with the proposed merger of Northeast Utilities and NSTAR. (2011)
- **Dominion Generation**  
Analysis of proposed state tax on output from in-state power generation. (2011)
- **Exelon Corporation and Clean Energy Group**  
Analysis of electric industry issues involved in responding to the U.S. Environmental Protection Agency's air emission regulations (2010-present).
- **Major electric distribution company and independent power producer**  
Analysis of the net benefits of retiring a set of generating units, and replacing it with a long-term contract to provide power from a gas-fired power plant and biomass power plant. Modeled locational energy prices, capacity prices, and revenue streams in the region. (2010)
- **Major electric utility company**  
Analysis of changing fuel-market conditions affecting the value of gas-fired power generation in the context of litigation. (2010)
- **Commonwealth Edison Company**  
Analysis of the ratemaking issues for a electric distribution utility with respect to energy efficiency program effects in Illinois (2010-present).
- **National Grid – Massachusetts electric distribution companies**

Analysis of the market for and other attributes of the long-term contract for power from the Cape Wind project (2010).

- **Spectra Energy (with the Interstate Natural Gas Association of America)**  
Analysis of the markets for natural gas, and analysis of the implications of the U.S. Environmental Protection Agency's Advanced Notice of Proposed Rulemaking on PCBs (2010-present).
- **Renewable energy company**  
Analysis of transmission access, planning, cost allocation and siting conditions in regions through the U.S. (2010-present)
- **Indian tribe in Midwest**  
Analysis of the value of an oil pipeline right-of-way. (2010)
- **Dominion Generation**  
Analysis of the proposed legislation in Connecticut to establish a windfall profits tax on all generating assets located in the state. (2010)
- **Transmission consortium**  
Analysis of cost-allocation models for an interstate transmission project involving transmission utilities and merchant transmission companies (2009-2010).
- **Massachusetts renewable energy trust**  
Analysis of transmission-related models and considerations for the development of offshore renewable energy (2009).
- **Major electric utility**  
Development of business models and approaches for deploying energy efficiency within the context of the American Climate and Energy Security Act framework (2009).
- **Major industrial electricity consumer**  
Assistance in analyzing the implications of the American Climate and Energy Security Act for the company, in light of impacts on energy prices and trade considerations (2009).
- **National Grid**  
Assistance in developing a revenue decoupling mechanism for retail distribution service, and providing expert witness assistance in electric and natural gas distribution rate cases in Massachusetts, Rhode Island, New York and New Hampshire (2009-present).
- **Sandia Pueblo**  
Assistance in valuing a transmission corridor on tribal reservation land (2008-present).
- **Major electric and gas company**  
Analytic and strategic support for company's development of a business plan for energy efficiency and other energy-related investments on the customer side of the meter (2008).
- **AEP Transmission**  
Prepared a white paper on the design and cost allocation framework for a high-voltage transmission system designed to support renewable and other resources (2008).
- **Reliant**  
Prepared study assessing competition in the wholesale and retail electricity markets in ERCOT Texas (2008).

- **Major environmental organization**  
Analytic and strategic support for utility ratemaking policies for advancing energy efficiency in a state (2008-present).
- **New York Independent System Operator**  
Supported strategic planning and assessment for the Board of Directors (2008-2010).
- **Commonwealth Edison Company**  
Provided testimony on ratemaking policy issues relating to regulatory lag (2008).
- **Energy Association of Pennsylvania (EGA)**  
Analysis of proposed legislation to cap retail electricity rates in Pennsylvania after the expiration of rate caps (2008).
- **National Association of Regulatory Utility Commissioners (NARUC)**  
Preparing study on best practices relating to state regulatory agency policies and utility practices on competitive procurement of resources to serve retail electricity customers. (2007).
- **KeySpan/Boston Gas**  
Analysis of the implications of utility ratemaking for valuation of utility assets for property taxation purposes (2008)
- **Electric company**  
Analysis of state's retail and wholesale power market structure (2008)
- **Electric company**  
Preparation of expert report on electric industry structure in the 1990s and 2000s (2007-2008).
- **Major electric company**  
Analytic support for company's development of strategic plan for company-wide greenhouse gas reduction commitments (2008).
- **Sierra Pacific Power Company**  
Provided testimony on policy issues relating to the use of historic, future, and hybrid test years in state utility rate cases (2007-2008).
- **Harvard University**  
Provides strategic assistance relating to regulatory issues affecting the planning and design of Harvard's "green campus" development in Allston Landing. (2007-2008).
- **Public Service Gas & Electric Company of New Jersey (PSEG)**  
Provided assistance in facilitating the development of a policy to address "leakage" of greenhouse gas emissions associated with the adoption of a cap-and-trade program in various Northeast states and the interstate sales of electricity in various Northeast/MidAtlantic power markets. (2007).
- **Electric Power Supply Association**  
Prepared white paper on economic, environmental & regulatory trends in the electric industry (2007).
- **Sempra Energy Company – San Diego Gas & Electric Company and SoCalGas Company**  
Provided testimony on policy issues relating to the provision of financial incentives to electric and gas utilities for the successful provision of energy efficiency programs. (2007).
- **PECO Energy Company**  
Provided advice on various economic and policy issues relating to electric industry restructuring

policy. (2007).

Provided testimony on issues relating to the market for alternative energy credits and the proposal of PECO to voluntarily solicit, procure and bank alternative energy credits. (2007).

- **Commonwealth Edison Company**  
Provided testimony on issues relating to the relationship of auctions for wholesale supply for basic service customers and alternative proposals for utility resource procurement. (2007).
- **ISO New England**  
Assisting Regional Transmission Organization in scenario planning process examining various future technology mixes for New England's electric system. (2006-2007).
- **PJM**  
Preparing report on market monitoring functions performed under various federal regulatory agencies with responsibility to oversee electricity and energy markets (i.e., the Federal Energy Regulatory Commission and the Commodities Futures Trading Commission). (2006-2007).
- **Major Industrial and Power Plant Company**  
Assisted company (located outside of New England) in analyzing market and negotiating the price and other terms and conditions for long-term gas supply (2006-2007). Assisted company in valuing a power plant asset. (2007).
- **State of North Carolina**  
Provided expert witness services on electric utility economics and regulatory issues, on behalf of the North Carolina Attorney General in his nuisance lawsuit to require the Tennessee Valley Authority to put in place air pollution control equipment on coal-fired power plants in the TVA system. (2006-2008).
- **Major Regional Transmission Organization**  
Performed analysis of market conditions and trends, and benchmarking market rules and reliability performance with other comparable organizations – in support of RTO's strategic planning process. (2006-2007).
- **Special LNG Committee, Commonwealth of Massachusetts**  
Prepared report on the need for natural gas and liquefied natural gas in the Northeast, the need for LNG facilities, the role of government in the LNG facility siting process, and other issues relating to LNG proposals in the Commonwealth. Provided on *pro-bono* basis to the Commonwealth. (2006).
- **Ute Indian Tribe of the Uintah and Ouray Reservation**  
Prepared a report on economic and policy issues relating to use of tribal lands for energy rights-of-way, as called for in Section 1813 of the Energy Policy Act of 2005. (2006).
- **New York ISO**  
Prepared white paper on fuel diversity issues in the New York market (2008).  
Prepared white papers on long-term contracting issues in states with restructured electric industries, and on the economic foundations for single-clearing-price markets versus pay-as-bid markets. (2007).  
Performed economic benefit/cost study of the introduction of competition into the wholesale electric market in the region (2006-2007).
- **Commonwealth Edison Company**  
Provided testimony on appropriate ratemaking principles for recovery of pension-related costs in proceeding to set rates to go into effect following the transition period. (2006).

- **Commonwealth Edison Company**  
Provided testimony on economic principles associated with single-price auction design versus pay-as-bid auction design, for the procurement of wholesale power supplies to meet the needs of retail all-requirements customers. (2006).
- **Exelon Corporation**  
Provided analysis of designs of mandatory carbon control policies. (2005-2007).
- **Sonosky, Chambers, Sachse, Endreson & Perry, LLP, on behalf of various Indian Tribes**  
Provided analysis in support of comments filed with the Departments of Interior and Energy with respect to the study of energy rights of way on tribal land which was called for in Section 1813 of the Energy Policy Act of 2005 (2005-2006)  
Provided analysis in support of various tribal negotiations with energy companies with respect to valuation of energy rights of way on tribal reservation lands. (2007).
- **Electric utility company**  
Performed independent evaluator services in procurement for power resources. (2005-2006).
- **Power Generation Company**  
Provided analysis of product market development in MidWest and Eastern RTOs. (2005).
- **New England Energy Alliance**  
Prepared a white paper on energy infrastructure needs in the New England states. (2005).
- **Committee on Regional Electric Power Cooperation (of the Western Interstate Energy Board)**  
Provides research and advising with respect to market monitoring and assessment for the Western wholesale electric markets. (2005-2007).
- **Southern California Edison Company**  
Provided Independent Evaluator services for a competitive procurement of new long-term generation resources and renewable resources. (2005).
- **LNG / Interstate Gas Pipeline project – Duke Energy/Exceleerate project**  
Prepared regional market study for the project proposed for Massachusetts. (2004-2005).
- **Electric Generating Company**  
In a contract dispute, provided expert witness services relating to whether changes in a region's wholesale power market rules nullified a power sales agreement. (2004-2006).
- **Louisville Gas & Electric and Kentucky Utilities**  
For two vertically integrated electric companies, provided expert witness services in a state investigation of which regional transmission approach satisfies state policy objectives. (2004).
- **Independent Generating Company**  
For a power company owned by commercial lenders in a Northeast power market, provided consulting services to monitor state regulatory policies and actions with respect to utility regulation and environmental regulation, and legislation affecting power plants. (2004).
- **Major Electric and Gas Company**  
Performed confidential study of the benefits, costs and current conditions in certain wholesale and retail electric power markets. (2004-2005).
- **Regional Transmission Organization**  
For a confidential project, analyzed market monitoring and mitigation approaches (2004-2005).

- **Major Commercial Bank**  
For a confidential project, advise with regard to electric industry restructuring and profitability of large energy marketer and trading organization (2004-2005).
- **Consumer Energy Council of America**  
For a group of electric industry market participants, regulators, and interest groups, prepared white papers on the need for transmission enhancements in U.S. power markets. (2004).
- **Retail electric company**  
Provides confidential analysis of business models and regulation approaches for providing retail electric service in the state. (2004).
- **Independent system operator**  
Provided confidential analysis and research on alignment of retail and wholesale market policies. (2004).
- **California State attorney general**  
Provided expert witness services with regard to state resource adequacy & planning practices. (2004).
- **Pacific Gas & Electric Company**  
Provided expert witness services relating to the public benefits of the settlement between PG&E and the California Public Utility Commission, to enable PG&E to emerge from bankruptcy. (2003).
- **Independent power company**  
Provided consulting advice on economics of compliance strategies for air and water permits. (2003).
- **Major public utility company**  
Provided expert advisory services to a buyer of power supplies relating to the pricing and other terms for a long-term purchase power agreement. (2003).
- **Duke Power**  
Provided expert advisory services relating to state rate-making and other regulatory practices. (2003).
- **Exelon Generation**  
Provided strategic advice and analytic services relating to market conditions affecting the client's generating assets in New England. (2003).
- **Entergy Services Inc.**  
Provides services as the independent monitor of Entergy's Fall 2002, Spring 2003 and Fall 2003 Requests for Proposals for Supply-Side Resources. (2002-2005).
- **Power generation company in New England**  
Provided expert testimony in contract dispute regarding allocation of uplift costs in an agreement concerning the supply of wholesale power for standard offer service. (2002).
- **Connecticut Light and Power Company**  
Provided expert testimony in contract dispute regarding allocation of congestion costs in an agreement concerning the supply of wholesale power for standard offer service. (2002 - 2003).
- **Ocean State Power**  
Provided arbitration services in a dispute regarding a gas purchase contract between Ocean State Power and ProGas Ltd. (2002-2003).

- **Regional independent system operator**  
Provided strategic advice on regional transmission organization strategy. (2002).
- **PJM Interconnection**  
Provided advice to the appointed mediator as part of the Alternative Dispute Resolution process, in a dispute involving PJM and a market participant. (2002).
- **Duke Energy Corporation**  
Provided analysis on strategic issues in gas and electric regulatory policy for Duke Energy's corporate office, including with regard to code of conduct issues, wholesale competition, regional transmission organization policy. (2001-2002).
- **Pacific Gas and Electric Corporation**  
Provided expert witness testimony in proceedings of the Federal Energy Regulatory Commission on public benefits of the proposed restructuring of PG&E assets as part of its emergence from bankruptcy. (2001-2002).
- **Massachusetts Renewables Trust**  
Provided assistance in support of the Trust's renewables and power quality program. (2001-2002).
- **Major electric holding company**  
Prepared an analysis of the regulatory policies for reviewing merger applications in states where potential merger candidates are located. (2001).
- **Western Massachusetts Electric Company**  
Provided expert testimony in contract disputes regarding allocation of congestion costs in agreements concerning the supply of wholesale power for standard offer service. (2001-2002).
- **The Energy Foundation**  
Researched and wrote a white paper on California's process for permitting new power plants. (2001).
- **Cross-Sound Cable Company**  
Provided expert testimony regarding public benefits of proposal to construct merchant transmission facility across Long Island Sound. (2001-2002).
- **Major independent power company**  
Provides expert witness support in litigation surrounding power plant development project, involving viability of project's environmental and siting permitting. (2001 - 2004).
- **MASSPOWER Inc.**  
Mediator in a contract dispute involving pricing of power purchases. (2001).
- **NRG Energy and Dynegy**  
Provided expert witness support in regulatory proceeding to review these companies' acquisition of power plants being divested by Sierra Pacific and Nevada Power. (2001)
- **Occidental Chemical Corporation**  
Provided expert witness support and economic analysis of a major electric utility's transmission policies and practices, and review of the proposed RTO. (2000)
- **PP&L Global**  
Provided economic and environmental analysis and expert witness support for proposal to build the Kings Park Energy power plant in Long Island, New York. (2000).

- **Calpine Corporation**  
Provided economic and environmental analysis and expert witness support for proposal to build the Wawayanda power project in Rockland County, New York (2000).  
  
Provided environmental analysis and expert witness support for proposal to build the Towantic power plant in Oxford, Connecticut. (2001).
- **American National Power, Calpine, El Paso, NRG Energy, Sithe, Southern Energy**  
Provided support for the development of a proposal for a Regional Transmission Organization for New England. (2000 - 2001).
- **Duke Energy/Maritimes and Northeast Pipeline**  
Provided expert reports on the market and environmental impacts of new natural gas infrastructure and supply in New England and the public benefits of the Maritimes and Northeast Phase III and Hubline project. (2000-2003).
- **Arkansas Electric Distribution Cooperatives and Arkansas Electric Cooperative Corporation**  
Provided expert witness support and analysis on economic and public policy issues associated with various aspects of wholesale and retail competition in Arkansas. (2000 - 2001).
- **TransÉnergie U.S.**  
Provided expert testimony regarding public benefits of proposal to construct merchant transmission facility. (2000 - 2001).
- **Conectiv**  
Provided strategic wholesale market analysis and support for procurement of supplies for distribution utility company's provision of Basic Generation Services to retail customers. (2000).
- **SCS Energy Corp. – Astoria Energy**  
Provided economic and environmental analysis and expert witness support for proposal to build new power plant in New York City. (2000 - 2001).
- **HEFA Power Options**  
Provided strategic advice regarding wholesale power market for retail buyers' group. (2000-2003).
- **Major real estate development company**  
Provided strategic support for configuration of electric and gas infrastructure for large regional mixed-use development project. (2000 - 2001).
- **Investment company**  
Provided strategic advice to investment company with regard to potential investment in major electric generating equipment manufacturing company. (2000).
- **Major independent power company**  
Provided economic and environmental support for company's application to construct a merchant power plant in Florida. (2000).
- **Major railroad company**  
Provided expert witness support on economic and regulatory policy issues for railroad in state regulatory proceeding on a proposed utility merger. (2000).
- **Coalition of Wireless Telecommunications Carriers**  
Prepared an expert report on economic benefits of wireless telecommunications. (2000).

- **Major brownfield property developer**  
Provided economic valuation of property to be developed as site for new electric generating facility. (2000).
- **Fitchburg Gas and Electric Company**  
Provided litigation support for a gas and electric company on rate design policy. (2000).
- **Consortium of electric companies**  
Provided economic analysis, contract review, and litigation support for a consortium of electric companies with power purchase agreements with PURPA projects. (1999).
- **FirstEnergy Corp.**  
Provided expert witness support regarding generation asset valuation and the impacts of a new electric industry restructuring law on the company. (1999 - 2000).
- **Ozone Attainment Coalition**  
Provided strategic analysis and advice on electric system reliability issues relating to electric companies' implementation of 2003 NO<sub>x</sub> requirements issued by the U.S. EPA. (1999).
- **Municipal electric department**  
Provided expert witness services and analysis of the economics and need for a new natural gas pipeline proposed to serve an existing electric power plant in Massachusetts. (1998 - 2001).
- **Seneca Nation**  
Provided expert analysis and strategic advice regarding the value of transmission rights of way, in a dispute with an electric utility company. (1998 - 2000).
- **Major cable company**  
Provided strategic advice in a series of regulatory and court cases involving inter-affiliate transactions of electric utility company entering into competitive telecommunications and cable markets. (1998).
- **Major electric utility company**  
Provided expert witness support regarding structural changes in the electric industry, in litigation pertaining to the company's restructuring plans. (1998 - 1999).
- **Sithe Energies, Inc.**  
Provided strategic advice and regulatory support on a variety of issues (market analysis, transmission and ISO issues, federal and state market rules, legislation, siting, environmental strategy) relating to the company's participation in the New England, New York, and PJM markets. (1997 to 2003).  
Provided transition assistance to the company in its acquisition and integration of approximately 2,000-megawatts of existing fossil fuel generation from Boston Edison Company. (1997 - 1998).  
Provided transition assistance to the company in its acquisition and integration of approximately 4,100-megawatts of existing fossil and hydroelectric generation capacity from GPU Genco. (1998 - 1999).  
Provided support for the company's participation in electricity product markets structured by NEPOOL and operated by the Independent System Operator-New England, the New York power pool and the New York ISO, and PJM. (1997 to 2002).  
Provided strategic project development advice and expert witness support for the company's applications to construct three natural gas merchant power plants (totaling 2865 megawatts) in

Everett, Weymouth, and Medway, Massachusetts. (1998 to 2001).

Provided strategic guidance and regulatory support regarding design of air quality improvement plan for existing fossil units at Mystic Station. (1998 to 2001).

Provided strategic guidance regarding company's natural gas-fired merchant power plant development projects in Ontario, Canada. (2000 to 2001).

- **Natural Resources Canada**

Prepared a white paper on the implications for electric system reliability in Canada that are associated with restructuring the electric industry in the United States. (1999).

- **Cummins Engine Company, Inc.**

Provided strategic analysis on implications of national energy and environmental policies for the Company's long-term business opportunities. (1999).

- **Electric utility company**

Provided advice and regulatory support with regard to the economics and prudence of an existing long-term power purchase agreement. (1998).

- **National Association of Regulatory Utility Commissioners (NARUC)**

Assisted the Executive Director and NARUC leadership in updating its strategic plan and in preparing a business plan for its implementation. (1998).

- **State energy office**

Assisted the office in analyzing options for supporting renewable resource development in the state and in designing a market-based strategy to implement a new legislative mandate for a "renewables portfolio standard." (1997-1998).

- **U.S. Generating Company (now PG&E Generating Company)**

Provided analysis of the economic, reliability, and environmental benefits to the host state and region of a new merchant power generation facility: the 360-megawatt Millennium project in Massachusetts. Provided expert witness testimony on the results of this analysis to the Massachusetts Energy Facility Siting Board. (1996-1997).

Provided analysis of the economic, reliability, and environmental benefits of a new merchant power generation facility: the 792-megawatt Lake Road Generating Project in Connecticut. Provided expert witness testimony on the need for this project to the Connecticut Siting Board. (1997-1998).

- **Pennsylvania Power & Light Company**

Provided strategic guidance, economic and policy analysis, and regulatory support for electric utility company as it developed and proposed its plan for restructuring its company for retail competition. Issues and tasks included electricity market price estimation, rate design, revenue analysis, consumer protection, corporate structure, and regulatory strategy. Provided expert witness testimony on rate design policy issues. (1996-1998).

- **Major diversified electric equipment company**

Provided strategic advice and analysis on market opportunities and risk in various regions of the U.S. electric industry, under numerous restructuring scenarios. (1996-1997).

- **Major nationwide electricity consumer**

Conducted analysis of buying options and strategies for acquisition of electricity services in states with customer choice in retail generation markets. Analysis included review and comparison of eight states' implementation of customer choice, from the perspective of how retail rate and function are

unbundled, how the commercial and reliability functions are structured in the regional generation market, and how the customer should approach the market to competitively procure power across various states. (1997).

- **National Council on Competition in the Electric Industry**

Prepared a Briefing Paper on Regional Issues in Electric Industry Restructuring, for the NCCEI—a joint project of the National Association of Regulatory Utility Commissioners, the National Conference of State Legislatures, the U.S. Department of Energy, and the U.S. Environmental Protection Agency. Analyzed regional issues, including electric system reliability, transmission access and siting, environmental protection, market power, interstate reciprocity in retail access policies, and regulation of multi-state electric utility companies. (1997).

- **Major western coal company**

Analysis of western states' electric industry restructuring policies and market prices for power in various states within the Western Systems Coordinating Council area. (1996-1997).

- **Major gas pipeline company**

Provided analysis of market structures and prices for generation and delivery services in electric service territories where the gas pipeline would locate facilities that use electricity. (1997).

- **Major electric supply company**

Provided analysis of regional electricity market conditions to support this company's analysis of the value of various utility assets that were being divested as part of an electric utility company's corporate restructuring. (1997).

- **Massachusetts Division of Energy Resources**

Analyzed Boston Gas Company's proposal for unbundling its retail service, its proposal for performance-based rates, and its plan for departing the merchant function. Provided analytic, policy and negotiation support on gas industry restructuring issues in a variety of cases. (1996-1998).

- **Massachusetts Division of Energy Resources**

Assisted the state's energy office in developing policies for establishing a statewide fund to support renewable resource development as part of the state's electric industry restructuring plan. Provided analytic support to the energy office as it participated in a working group of stakeholders attempting to reach consensus on the institutional design of such a renewables fund. Drafted legislative language to create the fund and the non-bypassable charge on electric distribution service in the state. (1997).

- **Massachusetts Water Resources Authority Advisory Board**

Analyzed opportunities for the MWRA, a public authority with major energy-using and -producing assets, to position itself beneficially as a participant in a restructured retail electricity market in New England. (1996-1997).

- **Coalition of marketers and independent power producers**

Analyzed a state public utility commission's proposed rules for restructuring the electric industry, from the point of view of whether the proposed structure would assure a workably competitive market. Examined the regional power pool's proposal for an independent system operator. (1996-1997).

- **Major independent power producer**

Analyzed market opportunities and risks for merchant plant development in a U.S. region (1996).

- **Major independent power producer**  
Analyzed the expected market price of power in two regions of the U.S. electricity markets. Presented results to company board of directors. (1996).
- **MCI, Inc.**  
Provided strategic regulatory advice in local competition proceeding before a state public utility commission. Provided testimony on local competition policy issues in public utility commission proceedings in Massachusetts and New York. (1996).
- **Group of municipal electric companies in New York State**  
Provided expert witness testimony on cost allocation issues in court litigation on wholesale power contracts. (1996).
- **Intercontinental Energy Corporation**  
Provided strategic guidance, analytic support, and regulatory support for the company, a major independent power producer, as it developed its position in the state's electric industry restructuring proceeding. Issues involved regional industry structure (including independent system operator proposals), stranded cost recovery policy, stranded cost calculation methodologies, horizontal and vertical market power issues, environmental protection, and securitization. Provided expert witness testimony in state retail restructuring proceedings in Massachusetts and New Jersey. (1995-1997).
- **Nextel Communications**  
Provided economic and policy analysis on barriers to entry in the local commercial mobile radio service market in region. Provided expert witness testimony before the Massachusetts Department of Public Utilities. (1995-1998).
- **Arizona Public Service Company**  
Provided expert witness testimony on regulatory reforms necessary to align traditional existing utility planning proceedings with competitive retail markets as being proposed in the state. (1995).

#### TESTIMONY ON BEHALF OF CLIENTS

Many confidential expert reports, testimonies, declarations, affidavits, and depositions in confidential arbitrations and mediations.

- **COMPETE Coalition**  
Before the New Jersey Board of Public Utilities, In the Matter, In the Matter of the Board's Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, October 14, 2011.
- **On her own behalf**  
Before the U.S. House Energy and Commerce Committee, Subcommittee on Energy and Power, EPA Regulations and Electric System Reliability, September 14, 2011.
- **On her own behalf**  
Before the U.S. Senate Environment and Public Works Committee, Subcommittee on Clean Air and Nuclear Safety, June 30, 2011, Oversight Hearing: Review of EPA Regulations Replacing the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR).
- **Exelon Corporation and Constellation Energy Group**  
Before the *Maryland Public Service Commission*, In the Matter of the Merger of Exelon Corporation and

Constellation Energy Group, Case No. 9271, prefiled direct testimony (May 25, 2011); rebuttal testimony (October 12, 2011), supplemental testimony (December 15, 2011), testimony under cross-examination (November 10, 2011, January 25, 2012).

▪ **New England Power Generators Association**

Before the *Massachusetts Public Utilities Commission, In the Matter of the Joint Petition for Approval of Merger [of Northeast Utilities and NSTAR] Pursuant to G.L. c. 164 , § 96, Docket D.P.U. 10-170*, prefiled direct testimony (May 20, 2011); testimony under cross-examination (July 15 and 18, 2011).

▪ **Commonwealth Edison Company**

Before the *Illinois Commerce Commission, Investigation of Proposed General Increase in Electric Rates of Commonwealth Edison Company*, Docket No. 10-0467, ComEd Exhibit 13.0, prefiled direct testimony (filed June 30, 2010); rebuttal testimony (filed November 22, 2010); surrebuttal testimony (filed January 2, 2011), testimony under cross-examination (January 18, 2011).

▪ **National Grid: Massachusetts Electric Company and Nantucket Electric Company**

Before the *Massachusetts Department of Public Utilities, Investigation as to the Petition of Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid for approval by the Department of Public Utilities of two long-term contracts to purchase wind power and renewable energy certificates, pursuant to G.L. c. 169, § 83 and 220 C.M.R. § 17.00 et seq. – Docket D.P.U. 10-54 (the Cape Wind contract proceeding)*, prefiled direct testimony (filed June 4, 2010), rebuttal testimony (filed September 1, 2010), testimony under cross examination (September 8, 13, 14, 23, 24, 2010).

▪ **National Grid: Boston Gas Company, Essex Gas Company, Colonial Gas Company**

Before the *Massachusetts Department of Public Utilities, Investigation as to the Propriety of Proposed Tariff Changes*, Docket No. D.P.U. 10-55, prefiled direct testimony (filed April 16, 2010); testified under cross-examination, June 28-29, 2010.

▪ **National Grid: EnergyNorth Natural Gas, Inc., d/b/a National Grid NH**

Before the *New Hampshire Public Utilities Commission, Investigation as to the Propriety of Proposed Natural Gas Tariff Changes*, Docket DG 10-017, prefiled direct testimony (filed February 26, 2010)

▪ **National Grid: Niagara Mohawk Power Corporation**

Before the *New York Public Service Commission, Investigation as to the Propriety of Proposed Electric Tariff Changes*, Docket No. 10-E-0050, prefiled direct testimony (filed January 29, 2009), rebuttal testimony (filed August 2010).

▪ **National Grid: Narragansett Electric Company**

Before the *Rhode Island Public Utilities Commission, Investigation as to the Propriety of Proposed Tariff Changes*, Docket No. R.I.P.U.C. 4065, prefiled direct testimony (filed June 1, 2009; testimony under cross-examination, November 4, 2009).

▪ **National Grid: Massachusetts Electric Company and Nantucket Electric Company**

Before the *Massachusetts Department of Public Utilities, Investigation as to the Propriety of Proposed Tariff Changes*, Docket No. D.P.U. 09-39, prefiled direct testimony (filed May 15, 2009; testimony under cross-examination, August 7 and 25, 2009, and September 8, 2009).

▪ **Amerada Hess Corp., et al.**

Before the District Court of the United States for the Southern District of New York, on behalf of Amerada Hess Corp., et al., in *City of New York v. Amerada Hess Corp. et al.*, Case No. 1:00-1898, testimony in deposition, May 12, 2009.

- **State of North Carolina**  
Before the District Court of the United States for the Western District of North Carolina, on behalf of North Carolina in *State of North Carolina, ex rel. Roy Cooper, Attorney General, v. Tennessee Valley Authority*, Case No. 1:06CV20, testimony in deposition, May 17, 2007; testimony at July 22, 2008.
- **KeySpan Energy Delivery (National Grid)**  
Before the Massachusetts Appellate Tax Board, *Boston Gas Company, d/b/a KeySpan Energy Delivery New England v. City of Boston*, Docket No. F275055-F275056 (FY 2004), F279207-F279208 (FY 2005), F284088-F286194 (FY 2006), testimony and cross-examination, May 20-21, 28, and June 4, 2008.
- **Commonwealth Edison Company**  
Before the *Illinois Commerce Commission*, Investigation of Proposed General Increase in Electric Rates of Commonwealth Edison Company, Docket No. 07-0566, ComEd Exhibit 18.0, prefiled rebuttal testimony (filed April 12, 2008).
- **Sierra Pacific Power Company**  
Before the Public Utilities Commission of Nevada, In the Matter of the Application of Sierra Pacific Power, filed pursuant to NRS 704.110(3), for authority to increase its general rates charged to all classes of electric customers to reflect an increase in annual revenue requirement, Docket No. 07-12 (filed December 3, 2007), Prefiled Direct Testimony (with David Sosa); cross examination, April 17-18, 2008.
- **Amerada Hess Corp., et al.**  
Before the District Court of the United States for the Southern District of New York, on behalf of Amerada Hess Corp., et al., in *County of Suffolk and Suffolk County Water Authority v. Amerada Hess Corp. et al.*, Case No. 1:00-1898, testimony filed October 1, 2007.
- **Sempra Energy Company – San Diego Gas & Electric Company and SoCalGas Company**  
Before the *California Public Utility Commission*, Order Instituting Rulemaking to Examine the Commission’s post-2005 Energy Efficiency Policies, Programs, Evaluation, Measurement and Verification and Related Issues, Rulemaking Docket 06-04-010 (Filed April 13, 2006), testimony filed May 3, 2007, cross examination, May 29, 2007.
- **Commonwealth Edison Company**  
Before the *Illinois Commerce Commission*, Investigation of Rider CPP of Commonwealth Edison Company, and Rider MV of Central Illinois Light Company d/b/a AmerenCILCO, of Central Illinois Public Service Company d/b/a/ AmerenCIPS, and of Illinois Power Company d/b/a Ameren IP, pursuant to Commission Orders regarding the Illinois Auction, Docket No. 06-0800, testimony filed April 6, 2007; cross-examination, April 24, 2007.
- **PECO Energy Company**  
Before the *Pennsylvania Public Utility Commission*, Petition of PECO for Approval of (1) a Process to Procure Alternative Energy Credits During the AEPS Banking Period, and (2) A Section 1307 Surcharge and Tariff to Recover AEPS Costs, Prefiled Direct Testimony, March 19, 2007.
- **Masspower**  
Before the Superior Court Department of Suffolk County, Massachusetts, *Massachusetts Municipal Wholesale Electric Company v. Masspower, et al.*, Civil No. 05-02710 (BLS1), on the changes in conditions in the electric industry in New England as they relate to Masspower’s performance under its power supply agreement with MMWEC; Expert Report, September 11, 2006; oral testimony under cross

examination at trial, October 16-17, 2006.

- **Commonwealth Edison Company**  
Before the *Illinois Commerce Commission*, Proposed general increase in electric rates, general restructuring of rates, price unbundling of bundled service rates, and revision of other terms and conditions of service, Docket No. 05-0597, Rebuttal Testimony, January 30, 2006; Surrebuttal Testimony, March 14, 2006; oral testimony under cross-examination, March 23, 2006. Testimony on rehearing, September 20, 2006.
- **Commonwealth Edison Company**  
Before the *Illinois House of Representatives, Electric Utility Oversight Committee*, on the Pay-as-Bid versus Uniform Price Auction Approach To Procurement of Wholesale Power for ComEd's Full-Requirements Customers, January 18, 2006, Springfield, Illinois.
- **Louisville Gas & Electric Company and Kentucky Utilities Company**  
Before the *Kentucky Public Service Commission*, Application of LG&E and KU to transfer functional control of their transmission assets, Case No. 2005-xxxx, Direct Testimony, November 19, 2005.
- **Western Massachusetts Electric Company**  
Before the Superior Court Department of Norfolk County, Massachusetts, *Alternative Power Source, Inc., v. Western Massachusetts Electric Company*, Civil Action No. 00-1967, on the allocation of costs related to transmission congestion in wholesale power contract for standard offer service. Expert Report, September 19, 2001; deposition, October 15, 2001; testimony at trial, July 15, 2005.
- **Entergy Louisiana, Inc. and Entergy Gulf States Inc.**  
Before the *Louisiana Public Service Commission*, Application of Entergy Louisiana, Inc. for Approval of the Purchase of Electric Generating Facilities and Entergy Gulf States, Inc. for Authority to Participate in Contract for the Purchase of Capacity and Electric Power, Docket No. U27836, January 21, 2005.
- **Louisville Gas & Electric Company and Kentucky Utilities Company**  
Before the *Kentucky Public Service Commission*, Investigation Into The Membership of Louisville Gas and Electric Company and Kentucky Utilities Company In The Midwest Independent Transmission System Operator, Inc., Case No. 2003-00266, September 29, 2004; Supplemental Rebuttal Testimony, January 10, 2005; testimony at hearing, June 2005.
- **Entergy Services Inc.**  
Before the *Federal Energy Regulatory Commission*, Entergy Services Inc., et al., in support of the application for approval of market-based power purchase agreements under Section 205 of the Federal Power Act. Affidavit, February 28, 2003; Affidavit, March 31, 2003; Testimony, September 2003; Testimony at deposition, November 20, 2003; Rebuttal Testimony, May 11, 2004; Deposition, May 27, 2004, and June 10-11, 2004; Testimony under cross-examination, July 19-23, 26-27, 2004.
- **Pacific Gas & Electric Company**  
Before the *California Public Utilities Commission*, In Re: Order Instituting Investigation into the ratemaking implications for Pacific Gas and Electric Company (PG&E) pursuant to the Commission's Alternative Plan of Reorganization under Chapter 11 of the Bankruptcy Code for PG&E, in the United States Bankruptcy Court, Northern District of California, San Francisco Division, In re Pacific Gas and Electric Company, Investigation 02-04-026, Pre-Filed Testimony, July 23, 2003, Testimony under cross-examination, September 12, 2003.
- **Entergy Louisiana, Inc.**  
Before the *Louisiana Public Service Commission, Entergy Service*, In Re: Application of Entergy

Louisiana, Inc., for Authorization to Enter into Certain Contracts for the Purchase of Capacity and Energy, Docket No. U-27136, Rebuttal Testimony, April 25, 2003.

- **Pacific Gas and Electric Company/PG&E Corporation**

Before the *Federal United States Bankruptcy Court, Northern District of California, San Francisco Division*, In Re: Pacific Gas and Electric Company, Debtor, Federal I.D. No. 94-0742640, on the public policy concerns raised by the proposed reorganization plan of PG&E Corporation. Expert report, November 8, 2002; rebuttal report, November 26, 2002.

- **PP&L Global**

Before the *New York Public Service Commission, Article X Siting Board*, on the economic and environmental benefits of the Kings Park Energy power plant. Prefiled direct testimony (with James Potter, Stephen T. Marron, David J. Kettler, and Thomas Conoscenti), January 2002; rebuttal testimony (with James Potter, Stephen T. Marron, William C. Miller, Jr., N. Dennis Eryou, and Robert W. Brown), October 23, 2002.

- **Connecticut Light & Power Company**

Before the *Federal United States District Court, District of Connecticut, Connecticut Light & Power Company v. NRG Power Marketing Inc.*, on their standard offer service wholesale sales agreement. Expert report, August 30, 2002; deposition, September 27, 2002.

- **Pacific Gas and Electric Company/PG&E Corporation**

Before the *Federal Energy Regulatory Commission, in the Matter of Pacific Gas and Electric Company, PG&E Corporation, on behalf of its Subsidiaries Electric Generation LLC, ETrans LLC, and GTrans LLC*, on the public benefits of the application seeking approval under Section 203 of the Federal Power Act and Section 12 of the Natural Gas Act for various actions relating to restructuring of the company to emerge from bankruptcy, November 30, 2001.

- **Cross-Sound Cable Company LLC**

Before the *Connecticut Siting Council*, on the public benefits of the proposed Cross Sound Cable Project's *Application for a Certificate of Environmental Compatibility and Public Need*, Docket No. 208. Prepared direct testimony, July 23, 2001; oral testimony under cross-examination, October 24-26, 29-30, 2001.

- **Sithe New England (Sithe Edgar LLC, Sithe New Boston LLC, Sithe Framingham LLC, Sithe West Medway LLC, Sithe Mystic LLC)**

Before the *Federal Energy Regulatory Commission, in the Matter of NSTAR Electric & Gas Corp., v. Sithe Edgar LLC, Sithe New Boston LLC, Sithe Framingham LLC, Sithe West Medway LLC, Sithe Mystic LLC, and PG&E Energy Trading*, Docket No. EL01-79-000. Affidavit comparing historical cost recovery by Boston Edison for its portfolio of fossil generation units (pre-divestiture) under rate regulation, versus Sithe's revenue recovery for these same units (post-divestiture) under market prices, June 5, 2001.

- **NRG Energy Inc. and Dynegy Holdings Inc.**

Before the *Public Utilities Commission of Nevada*, In Re: petition of the Attorney General's Bureau of Consumer Protection to issue an Order staying further proceedings regarding divestiture of Nevada's electric generation assets and to open a docket to consider whether to issue a moratorium on divestiture in Nevada. Supplemental prepared direct testimony on behalf of Valmy Power LLC, April 6, 2001; testimony under cross-examination.

Before the *Public Utilities Commission of Nevada*, In Re: petition of the Attorney General's Bureau of

Consumer Protection to issue an Order staying further proceedings regarding divestiture of Nevada's electric generation assets and to open a docket to consider whether to issue a moratorium on divestiture in Nevada, prepared direct testimony on behalf of Reid Gardner Power LLC and Clark Power LLC, April 3, 2001; testimony under cross-examination.

▪ **Sithe New England, LLC**

Before the *Federal Energy Regulatory Commission, In the Matter of Maine Public Utilities Commission and The United Illuminating Company v. ISO New England, Inc.*, affidavit on the role of price "spikes" in compensating generators for the services that they provide in the region, September 7, 2000.

▪ **Arkansas Electric Distribution Cooperatives**

Before the *Arkansas Public Service Commission, In the Matter of a Generic Proceeding to Establish Uniform Policies and Guidelines for a Standard Service Package*. Prepared joint reply testimony (with Janet Gail Besser), July 21, 2000; prepared joint surreply testimony (with Janet Gail Besser), August 3, 2000.

▪ **TransEnergie U.S.**

Before the *Connecticut Siting Council*, on the public benefits of the proposed Cross Sound Cable Project. Expert report, July, 2000; prepared direct testimony, September 20, 2000; oral testimony, September 27, 2000; supplemental written testimony, December 7, 2000; oral testimony under cross-examination, December 14, 2000; oral testimony January 9-11, 2001.

▪ **SCS Energy Corp.**

Before the *New York State Public Service Commission*, on the economic and environmental impact of a new combined cycle power plant in Queens, NY, June 19, 2000.

▪ **Reading Municipal Light Department**

Before the *Massachusetts Energy Facilities Siting Board, Docket No. EFSB 97-4*, on the economics and need for a new natural gas pipeline, June 19, 2000; testimony under cross-examination September 19, 2000, September 21-22, 2000, October 5, 2000, and October 17, 2000.

▪ **Fitchburg Gas and Electric Light Company**

Before the *Massachusetts Department of Telecommunications and Energy, Docket D.T.E. 99-66*, on gas and electric company rate design policy, testimony under cross-examination, January 14, 2000.

▪ **FirstEnergy Corp.**

Before the *Public Utilities Commission of Ohio, In the Matter of the Application of FirstEnergy Corp. on behalf of Ohio Edison Company, the Toledo Edison Company, and The Cleveland Electric Illuminating Company*: for Approval of an Electric Transition Plan and for Authorization to Recover Transition Revenues (Case No. 99-1212-EL-ETP); for Approval of New Tariffs (Case No. 99-1213-EL-ATA); for Certain Accounting Authority (Case No. 99-1214-EL-AAM), on recovery of transition costs and calculation of the market value of generation assets. Joint testimony (with Dr. Scott T. Jones), December 22, 1999; supplemental testimony (with Dr. Scott T. Jones), April 4, 2000; deposition, April 7, 2000.

▪ **Sithe New England, LLC**

Before the *Massachusetts Energy Facilities Siting Board, Docket EFSB 98-10*, in support of an application to construct a 540 MW gas-fired single cycle peaking power plant in Medway, Massachusetts. Prepared direct testimony, April 1999; oral testimony under cross-examination, July 27, 1999.

▪ **Village of Bergen, et al.**

Before the *Supreme Court of the State of New York, Index No. 081556*, Affidavit in Response to Defendant's Submission of February 25, 1999, in *Village of Bergen, et al., Plaintiffs, v. Power Authority of*

*the State of New York, Defendant, March 3, 1999.*

Before the *Supreme Court of the State of New York, Index No. 081556, Affidavit in Support of Petition to Correct Rates, in Village of Bergen, et al., Plaintiffs, v. Power Authority of the State of New York, Defendant, October 17, 1996.*

- **Sithe New England, LLC**  
Before the *Massachusetts Energy Facilities Siting Board, Docket EFSB 98-7*, in support of an application to construct a 750 MW gas-fired combined cycle power plant at the Fore River Station in Weymouth, Massachusetts (Edgar). Prepared direct testimony, February 10, 1999; oral testimony under cross-examination, July 26, 1999.
- **Sithe New England, LLC**  
Before the *Massachusetts Energy Facilities Siting Board, Docket EFSB 98-8*, in support of an application to construct a 1500 MW gas-fired combined cycle power plant at the Mystic Station in Everett, Massachusetts. Prepared direct testimony, February 10, 1999; oral testimony under cross-examination, May 25, June 2, 1999.
- **U.S. Generating Company**  
Before the *Connecticut Siting Board, Docket No. 189*, on an application to construct a new Lake Road Generating Project, September 1998. Oral testimony under cross-examination.
- **Central Hudson Gas & Electric Corporation**  
Before the *Supreme Court of New York, Index No. 255/1998, CHGE v. West Delaware Hydro Associates*, on issues relating to ratemaking treatment of costs relating to power contracts, April 13, 1998.
- **Sithe New England Holdings, LLC**  
Before the *Massachusetts Department of Telecommunications and Energy and the Massachusetts Energy Facilities Siting Board, Docket Nos. DTE98-84 and EFSB98-5*, on issues pertinent to forecast and supply planning by electric companies, September 14, 1998.
- **Sithe Energies, Inc.**  
Before the *Massachusetts Energy Facilities Siting Board, Docket No. EFSB98-3*, on issues related to the agency's rulemaking establishing a Technology Performance Standard, June 8, 1998.  
  
Before the *Massachusetts Energy Facilities Siting Board, Docket No. EFSB98-1*, on issues related to the agency's review of project viability as part of review of power plant applications, March 16, 1998.
- **Pennsylvania Power & Light**  
Rebuttal testimony on codes of conduct governing affiliate relations. *Pennsylvania Public Utility Commission, Docket Nos. A-122050F0003, A-120650F0006*, testimony under cross-examination, February 17, 1998.  
  
Rebuttal testimony on rate unbundling and rate design issues, on consumer protection issues. *Pennsylvania Public Utility Commission, Docket No. R-00973954*, testimony under cross-examination, August 5, 1997.  
  
Before the *Penn Public Utility Commission, Docket No. R-00973954*, on rate design, April 1, 1997.
- **Nextel Communications**  
Before the *Massachusetts Department of Public Utilities, Docket 95-59-B*, on telecommunications facility matters, testimony under cross-examination, January 1997.
- **Arizona Public Service Company**

Before the *Arizona Corporation Commission, Docket No. U-0000-95-506*, on integrated resource planning and competition, October 1996.

▪ **U.S. Generating Company**

Before the *Massachusetts Energy Facilities Siting Board, Docket 96-4*, on an application to construct a new Millennium power generating facility, testimony under cross-examination, October 1996.

▪ **MCI Communications, Inc.**

Before the *Massachusetts Department of Public Utilities*, in the NYNEX interconnection docket. Opening up the Local Exchange Market to Competition: Common Themes with Retail Competition in Electricity and Natural Gas Industries, August 30, 1996.

▪ **Intercontinental Energy Corporation**

Before the *New Jersey Board of Public Utilities, No. EX94120585Y*, on the Energy Master Plan Phase I Proceeding to Investigate the Future Structure of the Electric Power Industry, July 1996.

Before the *Massachusetts Department of Public Utilities, DPU 96-100*, on the Investigation Commencing a Notice of Inquiry/Rulemaking for Electric Industry Restructuring, July 1996.

## **PUBLICATIONS, REPORTS, ARTICLES**

Hibbard, Paul J., and Susan F. Tierney, "Carbon Control and the Economy: Economic Impacts of RGGI's First Three Years." *Electricity Journal*, December 2011.

Deutch, John, Steven Holditch, Fred Krupp, Kathleen McGinty, Mark Zoback, Susan Tierney, and Daniel Yergin, "The Secretary of Energy Advisory Board Shale Gas Production Subcommittee Second Ninety-Day Report" (on steps to address the environmental and safety performance of shale gas extraction) November 18, 2011.

Hibbard, Paul J., Susan F. Tierney, Andrea M. Okie, Pavel G. Darling, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States: *Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period*, November 15, 2011.

Deutch, John, Steven Holditch, Fred Krupp, Kathleen McGinty, Mark Zoback, Susan Tierney, and Daniel Yergin, "The Secretary of Energy Advisory Board Shale Gas Production Subcommittee Ninety-Day Report" (on steps to address the environmental and safety performance of shale gas extraction) August 11, 2011.

Hibbard, Paul J., Pavel Darling, and Susan Tierney, "Potomac River Generating Station: Update on Reliability and Environmental Considerations," prepared for the American Clean Skies Foundation, July 19, 2011

Bradley, Michael J., Susan F. Tierney, Christopher E. Van Atten, Amlan Saha, and Carrie Jenks, "Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability: Summer Update 2011," prepared for the Clean Energy Group, June 2011.

Tierney, Susan, and Charles Cicchetti, *The Results in Context: A Peer Review of EEI's "Potential Impacts of Environmental Regulation on the U.S. Generation Fleet,"* May 2011.

Tierney, Susan, "Policies for a Secure Energy Future: Issues in Supply and Demand," paper prepared for the Aspen Institute Congressional Program, February 22-27, 2011.

Tierney, Susan, "Guest Commentary: EPA Air Pollution Rules are Good for the Nation," *CarbonMarket North America*, February 11, 2011.

Tierney, Susan, "Electric Reliability under New EPA Power Plant Regulations: A Field Guide," January 18, 2011, <http://www.wri.org/stories/2011/01/electric-reliability-under-new-epa-power-plant-regulations-field-guide>.

Tierney, Susan, and Robert Earle, "The Costs of Compliance to EPA's Advance Notice of Proposed Rulemaking on the PCB Use Authorization for Interstate Natural Gas Pipelines," prepared on behalf of the Interstate Natural Gas Association of America ("INGAA"), September 10, 2010.

Bradley, Michael J., Susan F. Tierney, Christopher E. Van Atten, Paul J. Hibbard, Amlan Saha, and Carrie Jenks, "Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability," prepared for the Clean Energy Group, August 2010.

Tierney, Susan, "The New York Independent System Operator: A Ten-Year Review," prepared for the NYISO, April 12, 2010.

Tierney, Susan, "The Prospects for Natural Gas, Coal, and Nuclear Power in America's Energy Future," paper prepared for the Aspen Institute's Congressional Program on Energy Security and Climate Change: Policy Challenges for the Congress, Lisbon, Portugal, April 7, 2010.

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Tierney, Susan, "An Evaluation of the McCullough Research Report on New York's Wholesale Power Market," A report prepared for the New York ISO, March 25, 2009.

Tierney, Susan, Andrea Okie, Rana Mukerji, Michael Swider, Robert Safuto, Arvind Jaggi, "Fuel Diversity in the New York Electricity Market," A New York ISO White Paper, October 2008

Tierney, Susan, "ERCOT Texas's Competitive Power Experience: A View from the Outside Looking In," October, 2008.

Tierney, Susan, "A 21<sup>st</sup> Century "Interstate Electric Highway System" – Connecting Consumers and Domestic Clean Power Supplies," October 31, 2008.

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Tierney, Susan, and Todd Schatzki, "Competitive Procurement of Retail Electricity Supply: Recent Trends in State Policies and Utility Practices," prepared for the National Association of Regulatory Utility Commissioners (NARUC), July 2008.

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Tierney, Susan. "Pennsylvania's Electric Power Future: Trends and Guiding Principles," January 2008, Prepared for the Energy Association of Pennsylvania.

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Baldick, Ross, Ashley Brown, James Bushnell, Susan Tierney, and Terry Winter. "A National Perspective on Allocating the Costs of New Transmission Investment: Practice and Principles," A White Paper Prepared by The Blue Ribbon Panel on Cost Allocation for WIRES, the Working group for Investment in Reliable and Economic electric Systems, September 2007.

Tierney, Susan, "Adaptation and the Energy Sector," National Summit on Coping with Climate Change, University of Michigan, Ann Arbor, May 8-10, 2007.

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"A Cost-Benefit Assessment of Wholesale Electricity Restructuring and Competition in New England," co-authored with Dr. Matthew Barmack and Dr. Edward Kahn, *Journal of Regulatory Economics*, 2007, vol. 31, issue 2, pages 151-184.

Tierney, Susan, "Recollections of a State Regulator," NRRI 30<sup>th</sup> Anniversary, *Journal of Applied Regulation*, Volume 4, December 2006.

Barmack, Matthew, Edward Kahn, Susan Tierney, and Charles Goldman, "A Regional Approach to Market Monitoring in the West," Prepared the Western Interstate Energy Board Committee on Regional Electric Power Cooperation and Office of Electricity Delivery and Energy Reliability, Department of Energy, LBNL-61313, October 2006.

"Electric Reliability," letter to the Editor, *Issues in Science and Technology*, Fall 2006, Forum.

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"Energy Policy Act Section 1813 Comments: Report of the Ute Indian Tribe of the Uintah and Ouray Reservation for Submission to the U.S. Departments of Energy and Interior," co-authored with Paul J. Hibbard, In Cooperation With The Ute Indian Tribe of the Uintah and Ouray Reservation, May 15, 2006.

"In support of a Sound plan," Op Ed co-authored with John DeVillars, *Boston Globe*, April 23, 2006.

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"New energy bill doesn't do enough." Op Ed, *Boston Globe*, July 29, 2005.

"The Benefits of New LNG Infrastructure in Massachusetts and New England: The Northeast Gateway Project," Prepared for Northeast Gateway Energy Bridge, L.L.C., and Algonquin Gas Transmission, LLC, White Paper co-authored with Paul. J. Hibbard, June 2005.

"Principles for Market Monitoring and Mitigation in PJM: A Review of Economic Principles, Legal and Regulatory Structures, and Practices of Other Regions, with Recommendations," White Paper prepared for PJM Interconnection, January 3, 2005.

"Keeping the Power Flowing: Ensuring a Strong Transmission System to Support Consumer Needs For Cost-Effectiveness, Security and Reliability – A Report of the Transmission Infrastructure Forum of the

Consumer Energy Council of America," co-authored the report with CECA staff for this CECA Transmission Infrastructure Forum, January 2005.

Signatory to "Ending the Energy Stalemate: A Bipartisan Strategy to Meet America's Energy Challenges, Summary of Recommendations," National Commission on Energy Policy, December 2004.

"Comments of Susan F. Tierney and Paul J. Hibbard on their own behalf," before the *Federal Energy Regulatory Commission, in the Matters of Solicitation Processes for Public Utilities (Docket No. PL04-6-000) and Acquisition and Disposition of Merchant Generation Assets by Public Utilities (Docket No. PL04-9-000)*, on the role of independent monitors in public utility resource solicitations, July 1, 2004.

"Energy and Environmental Policy in the United States: Synergies and Challenges in the Electric Industry" (with Paul J. Hibbard), prepared for Le Centre Français sur les Etats-Unis (The French Center on the United States), July 2003; presentation in Paris, October, 2003.

"Supplemental Report on the Benefits of New Gas Infrastructure in New England: The Everett Extension Project" (with Charles Augustine), prepared for Algonquin Gas Transmission Company, February 5, 2003.

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"Siting Power Plants in the New Electric Industry Structure: Lessons California and Best Practices for Other States" (with Paul J. Hibbard), *The Electricity Journal*, June 2002.

"Maritimes Phase III & Algonquin Hubline: 'Coastal Dependency'" *CZM Consistency Review*, May 2002.

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"Activating Ontario's Capacity Market: Design and Implementation Issues" (with Janet Gail Besser and John Farr), prepared for Sithe Energies, Inc., October 24, 2001.

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"The Rationale and Need for Capacity Obligations and a Capacity Market in a Restructured Ontario Electricity Industry" (with Janet Gail Besser & John Farr), prepared for Sithe., September 27, 2001.

"Economic and Environmental Benefits of the Wawayanda Energy Center: System Production Modeling Report" (with Joseph Cavicchi), prepared for Wawayanda Energy Center, LLC, August 24, 2001.

"A Better CO<sub>2</sub> Rule," op-ed, *The New York Times*, May 16, 2001.

"Air Pollution Reductions Resulting from the Kings Park Energy Project" (with Joseph Cavicchi), prepared for PPL Global, January 24, 2001.

"Report on "Economic Benefits of Wireless Telecommunications," prepared on behalf of the N.H. Coalition of Wireless Carriers for the New Hampshire HB 733 Study Committee, November 13, 2000.

Expert Report: "Public Benefits of the Proposed Cross Sound Cable Project Prepared for TransÉnergie U.S. Ltd.," July 2000.

"The Benefits of New Gas Infrastructure in Massachusetts and New England: The Maritimes & Northeast Phase III Pipeline and the Algonquin Gas Transmission Company HubLine Projects" (with Wayne Oliver of Navigant Consulting), prepared for Maritimes & Northeast Pipeline, LLC and Algonquin Gas Transmission Company, October 2000.

"Production Modeling for the Astoria Project: Report on Results" (with John G. Farr), report for SCS Energy Corp., June 14, 2000.

"Observations from Across the Border: Implications for Canadian Reliability of Recent Changes in U.S. Electricity Markets and Policy," white paper for Natural Resources Canada, 1999.

"Research Support for the Power Industry" (with M. Granger Morgan), *Issues in Science and Technology*, Fall 1998.

"Maintaining Reliability in a Competitive U.S. Electricity Industry," Final Report of the Task Force on Electric System Reliability, U.S. Department of Energy, September 29, 1998.

"Regional Issues in Restructuring the Electric Industry," *The Electricity Industry Briefing Papers*, The National Council on Competition and the Electric Industry, April 1998.

"Fueling the Future: America's Automotive Alternatives" (with Philip Sharp), The American Assembly, Columbia University, Arden House, NY, September, 1995.

"Needed: Broad Perspective, Fresh Ideas," guest editorial, *The Electricity Journal*, November 1994.

Foreword in J. Raab, *Using Consensus Building to Improve Utility Regulation*, American Council for an Energy-Efficient Economy, Washington, DC, 1994

"Massachusetts' Pre-Approval Approach to Prudence in Massachusetts," *The Electricity Journal*, December 1990.

"Using Existing Tools to Pry Open Transmission—A New England Proposal," *The Electricity Journal*, April 1990.

"Sustainable Energy Strategy: Clean and Secure Energy for a Competitive Economy" (directed), National Energy Policy Plan, July 1995.

"The Domestic Natural Gas and Oil Initiative: First Annual Progress Report" (directed), U.S. Department of Energy, February 1995.

General Guidelines for Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992 (directed), U.S. Department of Energy, October 1994.

"Fueling a Competitive Economy: Strategic Plan for the U.S. Department of Energy" (directed), 1994.

"The Domestic Natural Gas and Oil Initiative: Energy Leadership in the World Economy" (directed), U.S. Department of Energy, December 1993.

"Siting Needs: Issues and Options," U.S. Department of Energy, June 1993.

"The Nuclear Waste Controversy," in D. Nelkin, *Controversy: The Politics of Technical Decisions*, Sage, 1977; 1984 (second edition).

*DATAWARS: Computer Models in the Federal Government* (with Kenneth L. Kraemer, Siegfried Dickhoven, and John Leslie King), Columbia University Press, 1987.

"The Evolution of the Nuclear Debate: Role of Public Participation," *Annual Review of Energy*, 1978.

## RECENT SPEECHES AND PRESENTATIONS

"Natural Gas: Policy Recommendations of the NPC, SEAB, and BPC," Energy, Utility and Environment Conference 2012, January 30, 2012.

"Economic Impacts of RGGI: Following the Dollars," Energy, Utility and Environment Conference 2012, January 30, 2012.

"Electric Power Systems: "The Outlook for Electric Transmission: Where You Stand Depends Upon Where You Sit," Yale University School of Forestry and Environmental Studies, January 24, 2012.

"U.S. Renewable Energy Policy: Overview, with comparisons to European approaches," presentation to the Wharton School, January 3, 2012.

"The Truth about Fracking," presentation to the New York Energy Forum, December 19, 2011.

"The Clean Energy Economy," presentation to the Environmental Lawyers, Environmental League of Massachusetts," November 30, 2011.

"Outlook for the Electric Generating Fleet: Effects of the Upcoming EPA Regulations," presentation to the Harvard Kennedy School Energy Policy Series, November 28, 2011.

"The National Petroleum Council's "Prudent Development: Realizing the Potential of North America's Abundant Natural Gas and Oil Resources," panel discussion at the NARUC Annual Meeting, St. Louis, November 15, 2011.

"The Future of U.S. Energy Policy: What happens when we assume no changes in the near term....?" Wharton Energy Conference – Energy Frontiers: A Global Perspective, Philadelphia, October 28, 2011.

"Natural Gas: Risks and Opportunities (\* with an emphasis on shale gas developments)," Harvard University Center for the Environment – Future of Energy Series, Cambridge, October 26, 2011.

"An Expanded Toolkit – Environmental Regulations, Natural Gas, and Modernizing the U.S. Generating Fleet," Great Lakes Symposium on Smart Grid and the New Energy Economy, Chicago, October 19, 2011.

"Pricing in a Western Energy Imbalance Market: Market Clearing Price versus Pay-As-Bid Pricing." Western Interstate Energy Board – Webinar on the Energy Imbalance Market," October 18, 2011.

"Federal and State Legislative and Regulatory Outlook: Connecting the Dots: Options for Upcoming Electric Resources," Emerging Issues Policy Forum, Amelia Island, October 9, 2011.

"Environmental Challenges Associated with Meeting Future Energy Needs: The role of shale gas?" National Association of Clean Air Agencies, Cleveland, October 4, 2011.

"Facing tough realities: Upcoming Energy and Environmental Issues – With a Focus on Electricity and Natural Gas," National Association of Clean Air Agencies, Cleveland, October 4, 2011.

"Assessing Natural Gas' New Promises and Controversies: Strategies to Improve the Safety & Environmental Performance of Shale Gas Extraction," Wisconsin Public Utilities Institute, University of Wisconsin at Madison, October 3, 2011.

"The Outlook for Natural Gas: Role of Shale Gas," EnerNOC EnergySMART Conference, Boston, September 27, 2011.

"The Outlook for Natural Gas: What does shale gas look like?" NECA Fuels Conference, Marlboro, MA, September 27, 2011.

"Facing tough realities: Upcoming Energy and Environmental Issues – With a Focus on Electricity and Natural Gas," Environmental Council of the States, Indianapolis, September 25, 2011.

"Electric Reliability Under EPA's New Air Regulations: What We Know, and What We Can Do About What We Don't Yet Know," National Association of State Energy Offices, September 12, 2011.

"The Future of Electricity Generation in the U.S. – A Modest Set of Observations," 19<sup>th</sup> Annual MIT-NESCAUM Endicott House Symposium (Opportunities for Technology and Policy Innovation in Energy and Environment), August 18, 2011.

"Unconventional Approaches: Part of the Electric Industry's Response to Upcoming EPA Regulations," Panel on Infrastructure Reliability and Adequacy at the Aspen Energy Policy Forum ("Changing Currents – Turbulence for the Electric Industry: Is Reliability a Real Issue for power plants given the EPA rules?"), Aspen, July 5, 2011.

"What we know, what we might know, and what we know we don't know yet," Joint Meeting of the NARUC, NASEO, and NACAA states, Baltimore, June 23, 2011.

"Facing tough realities: Energy and environmental issues in 2011 and beyond," Joint Meeting of the NARUC, NASEO, and NACAA states, Baltimore, June 23, 2011.

"China's Energy Challenges and Policy Responses: Observations from a U.S. Vantage Point," Connecticut College Vietnam Program, June 16, 2011.

"Strategies for Addressing Change at FERC and the RTOs: A new lens on responding to near-term changes," FERC/RTO Training Session, Panel on "Beyond Reliability: Economics, driving efficiency, demand response, and clean energy," Sponsored by the Institute Policy Integrity, New York City, July 15<sup>th</sup>, 2011.

"*'May you live in interesting times...'*: The Regulators' Tool-Kit in an Era of Uncertainty," Western Conference of Public Service Commissioner, Denver, June 14, 2011.

"Dirty to Clean? The future of Electric Power in America," CERES Conference 2011, Oakland, CA, May 12, 2011.

"EPA Regulations, Power Generation Capacity & Reliability," presentation to the MIT Center for Energy & Environmental Policy Research Workshop, Cambridge, MA, May 5, 2011.

"The Electric Industry's Response to EPA's Upcoming Regulations: Options for Owners and Others," presentation to the Energy Bar Association, Panel on Environmental Regulations, Washington, D.C., May 4, 2011.

"Framing the Issues: Energy and the Environment," Keynote address to the Health Effects Institute, Boston, May 2, 2011.

"Federal Air Pollution Regulations Affecting Fossil Power Plants: Current issues, implications, strategies," presentation to the 6<sup>th</sup> Annual Conference on Tribal Energy in the Southwest: New Opportunities for tribal projects, new policies, regulations and markets, Law Seminars International, Phoenix, April 29, 2011.

"China and U.S. Energy and Environmental Policy Challenges: Learning from Each Other, In It Together," presentation to China Energy & Environment Conference, Harvard University, April 9, 2011.

"EPA's MACT, Water Cooling Intake and Transport Rules: What now for power generation?"

presentation to SNL Energy Webinar, April 12, 2011.

“Policies for a Secure Energy Future: Issues in Supply and Demand,” presentation to the Aspen Institute Congressional Program’s meeting on Energy Security: Policy Considerations in the New Congress, San Juan, Puerto Rico, February 22-27, 2011.

“Responding to EPA’s Regulations Affecting Coal Plants: Using a 21<sup>st</sup> Century Toolkit (or, upgrading to the “Champ” from the “Classic”), presentation to the Panel on Environmental Regulations and Impacts on Electricity System Infrastructure, 2011 DOE/NARUC National Electricity Forum, Washington, D.C., February 16, 2011.

“Responding to EPA’s Regulations Affecting Coal Plants: Using a 21<sup>st</sup> Century Toolkit (or, upgrading to the “Champ” from the “Classic”), presentation to the Roundtable on the EPA Regulations, NARUC Winter Meeting, Washington, D.C., February 14, 2011.

“Local, State and Regional Coordination and Solutions: Non-conventional capacity and energy resources,” presentation to the Bipartisan Policy Center’s Workshop on Power Sector Environmental Regulations, Washington, D.C., January 19, 2011.

“Renewable Energy in New England,” presentation to the New Hampshire Business and Industry Conference, Concord, New Hampshire, December 7, 2010.

“Framing the Issues: Energy and the Environment,” presentation to the annual meeting of the National Academy of Public Administration, Washington, D.C., November 18, 2010.

“Toolkit for Ensuring Reliable, Economic Responses to EPA’s Proposed Air Regulations,” presentation on the panel on “The Climate Syndrome: Without Congressional Action, What Do State Regulators Need to Know?” NARUC Meeting, Atlanta, Georgia, November 17, 2010.

“Challenges for Recovering Costs During a Push for Cleaner Generation and More Efficient Energy Use,” Law Seminars International conference (Utility Rate Cases), Boston, November 9, 2010 (conference co-chair).

“Public Policy for Advanced Energy Technology,” presentation to the New York Advanced Energy Technology Conference, New York City, November 8, 2010.

“Energy Future: Bridging the Gap,” presentation to the Wharton Energy meeting, Philadelphia, October 28, 2010.

“Upcoming Power Sector Environmental Regulations: Framing the issues about potential reliability/ cost impacts,” presentation to the National Commission on Energy Policy Workshop on Power Sector Environmental Regulations, Washington, D.C., October 22, 2010.

“Vulnerability of the Gulf Coast Energy Infrastructure,” presentation to the Deltas 2010 – World Deltas Dialogue, America’s Energy Coast Policy Forum on The Future of the U.S. Gulf Coast Energy Infrastructure in the Face of Changing Climate,” New Orleans, October 20, 2010.

“Today’s Energy Landscape: Scanning the terrain – with tips for a safe journey,” presentation to the annual meeting of the National Association of State Energy Officials, September 30, 2010.

“2020: What can we expect? Where we are now, and how it influences where we’ll be a decade from now,” Law Seminars International conference, “Energy in the Northeast,” September 29, 2010.

“Today’s Energy Landscape: Exploring economic, environmental and technological trends,” presentation to the annual meeting of the Independent Power Producers of New York, September 22, 2010.

"Transforming America's Energy Systems: Challenges and opportunities along the nation's coastal and marine environments," Annual Lecture at the Metcalf Institute, University of Rhode Island, June 8, 2010.

"New England at the Crossroads: The Intersection between Regulatory Policy and Future Energy Supply," presentation to the Northeast Energy and Commerce Association, 17th New England Energy Conference, Green Thumb on the Scale: Impact on Future Energy Choices, June 8, 2010.

"Is Competition Dead?" presentation to the Annual Meeting of the New England Conference of Public Utility Commissioners, May 17, 2010.

"Why it is so Darn Hard to Adopt Advanced Energy Technologies, But So Worth the Effort," presentation to the Tufts University Energy Conference, "The Evolution of Energy," April 17, 2010.

"The Prospects for Natural Gas, Coal, and Nuclear Power in America's Energy Future," discussions with members of Congress at the Aspen Institute's Congressional Program on Energy Security and Climate Change: Policy Challenges for the Congress, April 6-10, 2010.

"Why is Modernizing Our Energy Technologies So Darn Hard, But Worth the Effort?" presentation to the MIT Energy Initiative Lecture Series, February 2, 2010.

"Themes in federal energy and climate policy issues in Washington – end of 3<sup>rd</sup> Q, 2009," presentation to the Kennedy School, Harvard University, November 18, 2009.

"Update on federal energy and climate policy issues in Washington – end of 3<sup>rd</sup> Q, 2009," presentation to the New York Independent System Operator Environmental Advisory Council, October 23, 2009.

"Challenges and Opportunities in Colorado's New Energy Economy – A View From Washington," presentation to the "Powering the Future – Colorado's New Energy Economy," Denver, Colorado – October 20<sup>th</sup>, 2009.

Financial Meltdown and Recovery: Challenges and Opportunities in the New Clean Energy Economy – Taking Stock in 3<sup>rd</sup> Q 2009," ABA Environment, Energy and Resources Law Summit 17<sup>th</sup> Section Meeting – Baltimore, September 25, 2009.

"Off-Shore Renewable Energy Development in NE: Massachusetts's New Ocean Management Plan," presentation to the New England Electric Restructuring Roundtable, September 18, 2009.

"Energy Policy for the 'Climate Change Era' – What's Your Definition of Green?" presentation to the 55<sup>th</sup> Annual Rocky Mountain Mineral Law Institute, San Francisco, July 23, 2009.

"The Goals for an Electricity Grid for the 21st Century: Where You Stand Depends Upon Where You Sit," presentation to the Aspen Institute Energy Policy Forum, Aspen, Colorado, July 9, 2009

"Linking Ends and Means in Energy & Environmental Policy: Intended and Unintended Consequences," presentation to the Harvard Electricity Policy Group, Cambridge, Massachusetts, May 28, 2009.

"Today's Energy Landscape: What's Coming Next for Energy & Resources Policy & Regulations," presentation to the Chief EH&S Officers Council (Joint with EH&S Legal Officers), The Conference Board – Washington, DC, May 14, 2009.

"Scanning Today's Energy Landscape in New England: Objects are Closer Than They Appear," Presentation to the New England Conference of Public Utility Commissioners, Newport, Rhode Island, May 3, 2009.

"Today's Energy Landscape: Objects are Closer Than They Appear." Presentation to the Energy Bar Association's 63rd Annual Meeting: Infrastructure, Policy, and Practice Amidst Economic Turmoil, Washington, D.C., April 23, 2009.

"Regulatory Treatment of Purchased Power: Pass Through or Profit Center? Give Away or Value Creation?" presentation to Harvard Electricity Policy Group, October 3, 2008., Harvard Electric Policy Group – Chicago, Illinois, October 3, 2008.

"Leadership Panel: Barriers to Acting in Time on Energy, and Strategies for Overcoming Them," Harvard University Conference: Acting in Time on Energy Policy, September 18, 2008.

"New England's Power Markets: The context for renewables development," Law Seminars International, September 8, 2008.

"Today's Business Environment for Electric Utilities – 10 Issues," presentation to the Public Utility Commissioners' Dialogue with the Investment Community, NYC, June 25, 2008.

"The Federal Role in Plug-In Vehicles," Plug-In Electric Vehicles 2008: What Role for Washington? Sponsored by the Brookings Institution and Google.org, June 12, 2008.

"State Policies for Energy Efficiency: Status and Observations," EIA's 2008 Energy Conference, panel on The Role of Energy Efficiency in Meeting Future Demand, April 8, 2008.

"Resource Adequacy, Entry & Current Electric Industry Trends," American Antitrust Institute, 3-3-2008.

"Preliminary Findings: Study of Model State and Utility Practices for Competitive Procurement of Retail Electric Supply," Presentation to the NARUC/FERC Collaborative, February 17, 2008.

"Energy Systems and Adaptation to Climate Change" presentation at Annual Meeting of the American Meteorological Society, Panel on Adaptation to Climate Change, New Orleans – January 21, 2008.

"Decoding Developments in Today's Electric Industry – The Larger Context for Western Mass' Energy Situation," presentation to the Western Massachusetts Energy Forum, January 15, 2008.

"Decoding Developments in Today's Electric Industry – Ten Points in the Prism" COMPETE/EPSC Meeting, Washington, DC, November 5th, 2007.

"Climate Science Research for the Energy Sector," presentation to the National Academy of Science Working Group, U.S. Climate Change Science Program, Washington, D.C., October 17, 2007.

"Climate and Energy – Facts on the Ground – A view from outside the region," Presentation to the Environmental Entrepreneurs Meeting, Boston, September 18, 2007.

"New England's Electric Industry in an Era of Climate Change, Globalization, and Alzheimer's: Where We Stand, Where We Need to Go. . .," Presentation to the New Hampshire Legislature, Electric Utility Restructuring Oversight Committee, Concord, New Hampshire, September 20, 2007.

"Summing Up," presentation to the Kleiner Perkins Caufield & Byers Greentech Innovation Network Forum, Aspen, Colorado, July 19, 2007.

"Market Monitoring at RTOs: Review of the Issues," presentation to the ISO/RTO Council – 2nd Annual IRC Board Conference, Boston, May 23, 2007.

"Adaptation and the Energy Sector," presentation to the University of Michigan – National Summit on Coping with Climate Change, Ann Arbor, May 8 2007.

"Lessons Learned from the Relationship Between Energy Legislation, Energy Strategy and Energy Institutions in the United States," presentation to the China Energy Law International Symposium, Diaoyutai State Guesthouse – Beijing, China, April 27-28, 2007

"Siting Energy Facilities in New England: What, Why, Where, and How," presentation to the Energy and Climate Forum, Tufts University, Medford MA, April 19, 2007

"New England's Electric Industry in an Era of Climate Change, Globalization, and Alzheimer's: Where We Stand, Where We Need to Go. . . .," presentation, 100<sup>th</sup> Massachusetts Restructuring Roundtable, "What Have We Accomplished With Electric Restructuring in New England Over the Past Decade, and What Do We Need To Accomplish Over the Next Decade?" Boston, March 30, 2007

"Electricity and Gas – Two Unique Energy Commodities: How They Work," presentation to Law Seminars International course on Introduction to Electricity & Natural Gas Regulation – A Primer Law Seminars International, Washington, DC, March 15, 2007

"The Effect of Federal and State Policies on Traditional Generation Technologies." presentation to Yale School of Management; Yale School of Forestry and Environment – course on Energy Economics & the Environment, New Haven CT, February 21, 2007

"National Energy Policy – The one we've got, others being pursued: Formulating a Comprehensive (and Stakeholder-Driven) U.S. National Energy Policy," presentation to MIT course on Developing Energy/Environmental Policies for a Sustainable Future, Cambridge, February 12, 2007

"New England's energy outlook: How it looks from where I Sit," presentation to the Joint Meeting of the Board of the Massachusetts Technology Collaborative and the Governing Board of the John Adams Innovation Institute, Boston, February 12, 2007

"Climate Workshop – Approaches for Dealing with Costs: Safety Valve, Circuit Breaker, Offsets, Allocation," Senate Energy Committee, Washington DC, February 16, 2007

"Working together regionally on energy and environmental issues ," presentation to the Ministerial Forum – Conference of New England Governors and Eastern Canadian Premiers, February 11, 2007

"Revisiting the Energy Policy Act of 2005: What's Working – and What's Not?" presentation to the Analysis Group Seminar, Denver, November 15, 2006

## **OTHER PROFESSIONAL ACTIVITIES**

Bipartisan Policy Center – Energy Project (2011 to present)

U.S. Secretary of Energy Advisory Board (July 2010 to present). Member of the Natural Gas Subcommittee examining shale gas development. (2010 to present)

Chair, Policy Subgroup of the National Petroleum Council's study on North American Gas and Oil Resource Development (2010-2011)

Member, Board of Directors, Alliance to Save Energy (2011 to present)

Visiting Professor, Department of Urban Studies and Planning, Massachusetts Institute of Technology, Spring 2010.

Massachusetts Clean Energy Grand Prize Judge, May 11, 2010.

Member, Board of Directors, EnerNOC, Inc. (February 2010 to present)

Member, Board of Directors, World Resources Institute (2009 to present). Chair of Presidential Search Committee (2011).

Co-Lead, Department of Energy Agency Review Team, Obama/Biden Presidential Transition Team, Washington D.C., 2008-2009 (while on full-time leave for four months from Analysis Group).

Chair, Massachusetts Ocean Advisory Commission, 2008 to 2010.

Member, Board of Directors, Evergreen Solar, Inc., 2008 to 2011.

Member, Board of Directors, Ze-gen Inc., 2009 to 2011, Market Advisory Board, 2008-2009.

Member, Board of Directors, Renegy Holdings, 2007 to 2009.

Member, Blue Ribbon Commission on Cost-Allocation Issues for Transmission Investment, WIRES, 2007.

Chair, External Advisory Council, National Renewables Energy Laboratory (2009 to present).

Member, National Academy of Sciences Committee on Enhancing the Robustness and Resilience of Electrical Transmission and Distribution in the United States to Terrorist Attack, 2005 to 2008.

Member, New York Independent System Operator, Environmental Advisory Council, 2004 to 2010.

Member, National Commission on Energy Policy, member, 2002 to 2011; co-chair, 2009-2011.

Member, Board of Directors, Clean Air Task Force, 2008-present; Advisory Council, 2002 to 2008.

Member, Board of Directors, Catalytica Energy Systems Inc., 2001 to 2007.

Member, Board of Directors, Climate Policy Center, 2001 to 2007.

Member, Advisory Committee, Carnegie Mellon Electricity Industry Center, 2001 to 2009.

Member, Policy Advisory Committee, China Sustainable Energy Project—A Joint Project of The Packard Foundation and The Energy Foundation (1999 to present).

Director, NorthEast States Center for a Clean Air Future, 1998 to 2010.

Chair of the Board of Directors, The Energy Foundation, 2000 to 2011; Vice-Chair, 1999-2000; Director, 1997 to 2011.

Chair of the Board of Directors, Clean Air—Cool Planet / Climate Policy Center, 2004 to 2009; director, 1999-present.

Member, Board of Directors, ACORE (American Council on Renewable Energy), 2006-2007.

Co-Chair, Energy/Environment Working Group, Governor Deval Patrick Transition Team (2006-2007).

Presenter, Economic Issues, National LNG Forums, U.S. Department of Energy, Boston Massachusetts; Astoria, Oregon (2006).

Chair of the Technical Review Panel, Critical Infrastructure Protection Decision Support Systems (CIP-DSS), Argonne, Los Alamos and Sandia National Laboratories, 2006.

Advisory Council member, New England Energy Alliance, 2005-2006.

Member, Board of Directors, Electric Power Research Institute, 1998 to 2003, 2005-2006.

Chair of the Laboratory Direction's Division Review Panel for the Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory, 2005.

Chair, Ocean Management Task Force, Commonwealth of Massachusetts, 2003-2004.

Co-Chair, RTO Futures: Regional Power Working Group, 2001-2002.

Chair, Board of Directors, Electricity Innovations Institute, 2002 to 2004; Director, 2001 to 2002.

Member, Florida Energy 2020 Study Commission, Environmental Technical Advisory Committee, 2001.

Technical Advisor, Mid-Atlantic Area Council/PJM, Dispute Resolution Procedure, 1998 to 2008.

Member, "ISO-New England" (Independent System Operator) Advisory Committee, 1998 to 2003.

Director, The Randers Group (subsidiary of Thermo TERRATEK), 1997 to 2000.

Director, MHI, Inc. (electric utility aggregator in Massachusetts), 1997 – 1999.

Director, Thermo ECOTEK Corporation, 1996 – 1999.

Member, United States Department of Energy, Electricity Reliability Task Force, 1996-1998.

Member, Harvard Electricity Policy Group, 1993 to 2005.

### **HONORS AND AWARDS**

Climate Champion Award, Clean Air – Cool Planet, 2009.

Distinguished Alumna Award, Scripps College, Claremont, CA, 1998

Award for Individual Leadership in Public Service, *The Energy Daily*, 1995

Special Recognition Award for Outstanding Contribution to the Industry, Cogeneration and Competitive Power Institute, Association of Energy Engineers, 1994

Leadership Award, National Association of State Energy Officials, 1994

Commencement Speaker and Honorary Doctorate of Laws, Regis College, Weston, MA, 1992.