

FRANCIS H. CUMMINGS

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CLEAN ENERGY BUSINESS LEADER

Energy strategist and consultant with particular expertise in the development of renewable and distributed power markets. Change agent at the forefront of innovation in New England energy markets. (See list of 'firsts' below.) Fine grasp of the current business opportunities in the areas of climate change, smart grid development, and the role of the electric utility in the transition to the new energy economy. Advanced skills in strategic planning, financial modeling and business-case development. B.A. in Economics from Harvard College.

- Persuasive communicator and skilled negotiator with a record of achieving buy-in from diverse constituencies.
- Highly networked within the public and private sectors in the energy and environmental fields in New England.
- Noted authority, conference speaker and expert witness.

AREAS OF EXPERTISE

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|---|---|
| <input type="checkbox"/> Carbon Markets | <input type="checkbox"/> Distributed Energy Resources (DER) |
| <input type="checkbox"/> Smart Grid | <input type="checkbox"/> Combined Heat and Power (CHP) |
| <input type="checkbox"/> Utility Strategy | <input type="checkbox"/> Energy Efficiency & Renewable Energy |

CAREER HIGHLIGHTS

- Member of the 10-state Working Group of the Regional Greenhouse Gas Initiative (RGGI) to plan and implement the first auction of RGGI allowances (received EPA Environmental Merit Award, April 2009).
- Directed pilot projects with NSTAR and National Grid that demonstrated the ability to achieve zero load growth by achieving record-breaking market penetration of integrated energy audits and solar PV systems.
- Directed the [Massachusetts Distributed Generation Collaborative](#), including submission of economic reports to state regulators on interconnection and distribution planning.
- Developed an innovative \$30 million program -- "[MGPP](#)" -- to support construction financing of renewable power projects by contracting to buy renewable certificates over a 10-year period. This led to contracts for 100 megawatts of green electricity commitments in New England across 6 projects in the first round.
- Developed filings and testified before regulatory and legislative bodies in MA, CT, ME, NY and NJ.
- Prepared the 2000 [Connecticut Energy Policy Report](#) for the CT Energy Advisory Board.
- Directed preparation of the 1999 [Renewable Energy Sections of the New Jersey Comprehensive Resource Assessment](#), which led to New Jersey's first renewable energy programs.
- Provided financial and regulatory support for negotiation of the first contract on the East Coast for the sale of solar power to a competitive retail electric supplier (1999), and the first contract for the sale of energy-efficiency resources to an electric utility (1988).
- Negotiated restructuring settlements with NEES (now National Grid) and Boston Edison (now NSTAR) in 1996 and 1997 as Policy Director at the Massachusetts Division of Energy Resources.
- Directed the development of the [1993 Massachusetts Energy Plan](#), which included an Energy Technology Development Center & Energy Venture Capital Fund (implemented in STEP, Renewable Energy Trust).

PROFESSIONAL EXPERIENCE

- MASSACHUSETTS TECHNOLOGY COLLABORATIVE, Westborough, MA August 2002 to Present
Policy Director, Renewable Energy Trust
- Collaborate with public and private sector stakeholders to overcome market and regulatory barriers to the increased availability and affordability of renewable energy for Massachusetts customers.
 - Develop arrangements for long-term contracting to bring the economic and other benefits of renewable project financing to Massachusetts energy users.
 - Provide leadership and support for the Massachusetts Distributed Generation (DG) Collaborative, asked by state regulators to develop and monitor uniform interconnection standards and study the role of DG in distribution company planning and the benefits of DG.
 - Work with Massachusetts Division on Energy Resources and the 10-state Working Group of the Regional Greenhouse Gas Initiative (RGGI) to plan and implement the first auction of RGGI allowances.
- XENERGY Inc., Burlington, MA 1999 to 2002
Principal, Consulting Division
- Directed XENERGY engagements in state energy policy, renewable energy and distributed power.
 - Prepared energy policy and regulatory filings and testified on energy matters in MA, CT, ME, NY & NJ.
 - Provided marketing, development, and regulatory assistance to leading companies in the renewable, energy efficiency, demand response and distributed power industries.
 - Led XENERGY's program evaluation of the renewable component of the Wisconsin *Focus on Energy* program.
- CUMMINGS CONSULTING INITIATIVES (CCI), Concord, MA 1998 – 1999
Management Consultant
- Engagements included regulatory and marketing support for leading developers of solar and cogeneration projects, cash flow modeling for wind power projects and regulatory testimony on the NE renewable power market.
 - [Summary of consulting qualifications and project development experience through 1999.](#)
- MASSACHUSETTS DIVISION OF ENERGY RESOURCES (DOER) 1994 – 1998
Director of Policy, State Energy Office
- Recruited to take over the policy function as a follow-on to consulting work provided through CCI. Responsible for state energy policy development, particularly the formulation of DOER policy and strategy for electric restructuring, energy efficiency, and renewable power, featuring path-breaking strategies with nationwide impact.
 - Represented DOER in the negotiation of the 1995 agreement with four electric utilities and other key stakeholders that established the principles for restructuring in Massachusetts.
 - Developed the Governor's 1996 generic restructuring plan, which featured voluntary divestiture of utility-generating assets and market pricing of basic service.
 - Played a leadership role in regulatory proceedings, settlement negotiations, and legislative drafting.
- CUMMINGS CONSULTING, INC. (CCI), Concord, MA 1989 – 1994
President, Management Consulting Practice
- Specialized in strategic planning for public- and private- sector initiatives in New England's energy markets.
 - Services included state energy planning, energy market analysis, project management and facilitation for renewable and cogeneration projects and energy efficiency programs.
- SWIFT RIVER/HAFSLUND COMPANY, Danvers, MA 1981 – 1989
Assistant Treasurer, Renewable Energy Resource Development Company
- Responsible for project and corporate financial analysis and risk assessment.
 - Developed pricing and investment strategies and negotiated loan agreements and contracts for the company's development projects, acquisitions and joint ventures, including hydropower, biomass power, natural gas cogeneration facilities and demand-side management projects.

EDUCATION

B.A., Economics, Harvard College, Cambridge, MA

TESTIMONY

- New Jersey Board of Public Utilities: Comprehensive Renewable Resource Assessment (November 1999).
- Joint Utility Committee, Maine Legislature: Renewable Portfolio Requirement (February 18, 1999).
- Maine Public Utilities Commission: Renewable Portfolio Requirement (1998, Docket No. 98-619).
- Massachusetts Department of Telecommunications and Energy (formerly DPU):
 - Competitive Metering, Billing and Information Services (2000)
 - Terms and Conditions Generic for Retail Electric Market (1997)
 - Boston Edison Holding Company Case (1997)
 - Electricity Restructuring Generic (D.P.U. 96-100: 1996, *multiple hearings*)
 - Natural Gas Interruptible Transportation Generic (1995).

INNOVATIONS

Played critical roles in the following path-breaking developments:

- First U.S. auction of greenhouse gas emission allowances, by the Regional Greenhouse Gas Initiative (2008).
- First utility integration of energy efficiency, direct load control, and renewable energy audits and incentives to defer distribution capacity additions (2007).
- First state agency long-term contracts for RECs to support financing of new renewable power facilities (2003).
- First eligibility of behind-the-meter DG for RECs (2002), and first voting role for alternative energy in NEPOOL governance (2004).
- First report on Load Response Program Design for ISO-New England (2001).
- First statewide Comprehensive Renewable Resource Assessment for the New Jersey Board of Public Utilities: (1999).
- First solar power sale contract with a competitive retail electricity provider (1998).
- First solar PV power purchase agreement for a commercial customer (1998).
- First contract for the sale of energy-efficiency resources to an electric utility (1988).
- First "Energy Independence" Plan for a National Park (Lowell).
- First national assessment of potential and barriers for industrial cogeneration, which contributed to enactment of PURPA.
- First residential energy audit company.
- First federal study of the impact of vertical integration on innovation in the telecommunications industry, which contributed to the breakup of AT&T.

SELECTED REPORTS, ARTICLES & PRESENTATIONS

- ["Distributed Generation Potential and Planning,"](#) *Distributed Energy Conference at Stratton Mountain* (May 2008)
- [Articles about Marshfield Energy Challenge,](#) *Boston Globe, Restructuring Today, other press* (March - May, 2008)
- ["Clearing Paths to Green Energy,"](#) *Facing New Realities,* Northeast Public Power Association (NEPPA) 2006 Annual Conference, Plymouth, MA (August 2006)
- ["Northeast Regional Challenges to Modern Grid Implementation,"](#) *Modernizing the Grid,* Northeast Regional Summit of the Modern Grid Initiative, Lenox, MA (June 2006)
- ["Long-Term Revenue to Help Secure Renewable Project Financing,"](#) *Renewable Energy Conference,* Northeast Energy & Commerce Association, Boston, MA (March 2004 and June 2005)
- ["Recent Activities of the Massachusetts Renewable Energy Trust: Building Renewable Energy Projects through the Massachusetts Green Power Partnership,"](#) *Restructuring Roundtable,* Boston, MA (June 2003)
- ["How to Build a Green Distributed Power Market,"](#) *Restructuring Roundtable,* Boston, MA (June 2002)
- "Wires Issues for the Green Distributed Power Market," *Moving On to New Markets,* Northeast Energy & Commerce Association (www.necanews.org), Boxborough, MA (May 2002)
- "Fuel Cell Market Entry Strategies for Utilities," *Fuel Cells 2002,* Business Communication Co., Stamford, CT (April 2002)
- [Demand Response: Profit Center and Policy Solution,](#) including *DR-BIZ Financial Model,* XENERGY Inc. (March 2002)
- ["Distribution-Level Opportunities & Barriers For Distributed Renewables,"](#) submitted to Massachusetts Technology Collaborative, Solar Energy Business Association of New England and Conservation Services Group (December 2001)
- [Load Response Program Design Issues,](#) prepared by Francis Cummings & Tom Michelman, KEMA Consulting, Inc., submitted to ISO-New England (December 2001)
- "Establishing Demand Response Programs that Work," Pre-Conference Workshop 2, *Energy Infrastructure in the Northeast Conference,* Infocast, Inc., Boston MA (January 2001)
- [Distributed Power Markets 2000: Final Report,](#) XENERGY Retail Energy Markets Project (February 2001)
- "The State of Retail Competition in the Northeast," *Northeast Power Markets: The New Realities, Platts/Northeast Power Report,* Boston, MA (November 2000)
- "Distributed Power Market: Perfect Storm, or Win/Win Ratemaking Principles," *NECPUC Conference,* Rockport, Maine (June 2000)
- "Selling Renewable DG into the Retail Green Power Market," *Distributed Generation Conference,* Denver, CO (March 1, 2000)
- [Possibilities for the New Century,](#) *The Energy Policy Report of the Connecticut Energy Advisory Board,* submitted to the Connecticut General Assembly on February 1, 2000
- ["Distributed Generation Paradigms and Principles for Massachusetts,"](#) *Massachusetts Restructuring Roundtable,* Boston, MA (January 2000)
- ["Paradigm Busters: Why Distributed Generation Will Rewrite the Rules of Open Access,"](#) with Philip M. Marston, *Public Utilities Fortnightly* (October 1999)

"Progress Report: Electric Restructuring," *Associated Industries of Massachusetts* (June 1999)

"Climate Change Mitigation from Distributed Generation in a Competitive Electric Market," *Global Climate Change in Maine*, Lewiston, ME (April 1999)

Conference Chairman and Speaker, "Selling Electricity Under Different State Rules," *e-Commerce in the Energy Industry*, International Business Communications, Boston, MA (September 1998)

"Case Study: NEPCO Sale to US Generating Company," *VT Public Service Board Electricity Futures Workshop*, Montpelier, VT (August 1998)

"Consumer Protection and Uniform Information Disclosure Requirements for Sellers," *Emerging Business Opportunities in the Northeast Retail Marketplace*, The Energy Institute, New York, NY (March 1998)

"The ISO Role in Creating a Competitive Wholesale Market," *Massachusetts Health & Educational Authority* (November 1997)

Improved Reporting and Management of Toxic Materials Data, for Vermont Blue Ribbon Task Force on Hazardous Waste

Developing Acceptable Hazardous Waste Facilities in New England, including four siting handbooks, for the New England Regional Commission

Lowell National Park Energy Conservation Study: A Cost-Effective Plan for Energy Independence, for the National Park Service

"A Rational Approach to Power Plant Siting," IEEE Spectrum

Links in this resume can be found at www.fcummings.com.