

Energy and Environment Working Group

This case study will focus on the role that progressive business leaders played in shaping and supporting recent clean energy legislation in Massachusetts. The following is a composite of the New England Clean Energy Council, the leaders who helped form the council, and the important role that collaboration played in shaping energy and environment public policy initiatives that include the Green Communities Act, the Green Jobs Act, and the Global Warming Solutions Act.

Chair: Mitchell Tyson, CEO, Advanced Electron Beams

Coordinator: Roger Freeman, Managing Director, Citizens Energy Corporation

Presenters: Mitchell Tyson, CEO, Advanced Electron Beams, Philip Guidice, Commissioner, Massachusetts Department of Energy Resources, Lori Ribeiro, Senior Consultant, Blue Wave Strategies

The New England Clean Energy Council

In October 2007, the Clean Energy Council and the New England Energy Innovation Collaborative (NEEIC) merged to become the New England Clean Energy Council (NECEC). The new council's mission was to accelerate New England's clean energy economy by building an active community of stakeholders and supporting the development of a "world-class cluster of clean energy companies."¹

At the time of the merger, Clean Energy Council members had already identified *acceleration initiatives* to guide the clean energy industry's growth in New England, including "increasing public and private funding for clean energy development, lobbying for rate changes that would give utilities greater incentives to buy green energy, as well as promoting incentives for the public to use environmentally sustainable energy."² Those initiatives overlapped with NEEIC's existing focus areas and with the merger, the initiatives were intertwined into five core areas that were developed with the one goal of accelerating New England's clean energy economy.

Innovation – To stimulate research and development of clean energy businesses and dramatically accelerate start-up activity

Growth – To support the in-state expansion of existing clean-energy businesses

Education – To derive data on the sector and build a strong clean energy workforce

Adoption – To ensure the adoption of clean energy technologies by non-energy businesses

Policy – To advance policy initiatives that directly support the growth of the sector³

The NECEC is unique in that it represents a diverse set of stakeholders, including clean energy companies, venture capital firms, environmental groups, utilities, labor, service providers, universities, energy users, and technology-specific industry associations. The council did not seek to replace or duplicate existing organizations or efforts, but sought to address broader issues in order to help the clean energy cluster grow.

Clean Energy Legislation in Massachusetts

¹ *New England Clean Energy Council Launches*, Mass High Tech: The Journal of New England Technology, www.masshightech.com, October 22, 2007

² *Merger Brewing Between New England Energy Innovation Collaborative, Clean Energy Council*, Xconomy, www.xconomy.com, August 27, 2007

³ New England Clean Energy Council, www.necec.org

In 2006, the New England Energy Innovation Collaborative formed as a result of the growing number of companies and venture capital firms working in the clean energy field. Governor Deval Patrick ran for governor on a platform of helping the state's clean energy sector grow to world leadership. And House Speaker Salvatore DiMasi introduced a package of bills to address the emerging clean energy opportunity. In 2007 these groups, along with many other people, worked together to gain political alignment and consensus; in 2008, Massachusetts positioned itself to become a global leader of clean energy policy when Massachusetts legislators passed a total of seven clean energy measures, including the Green Communities Act, the Green Jobs Act, and the Global Warming Solutions Act.

These Massachusetts policy measures were the result of an unprecedented collaboration that included Governor Deval Patrick, House Speaker Salvatore DiMasi, Senate President Therese Murray, Massachusetts Executive Office of Energy and Environmental Affairs Secretary Ian Bowles, and many members of the administration and of the House and Senate.

Also involved in the formation of these legislation pieces were dozens of organizations, including the New England Clean Energy Council, which lobbied the state legislature to enact policies that would put Massachusetts in the forefront of the clean energy industry and be a state model for environmental sustainability.

The Green Communities Act

This legislation was passed in July 2008 as a result of the close collaboration of House Speaker Salvatore DiMasi and Senate President Therese Murray, as well as the desire of clean energy experts and industry leaders for increased use of renewable energy that would reduce consumer electric bills and stimulate the clean energy industry.

- Promoting Energy Efficiency

Under the new law, utilities were required to treat energy efficiency programs as equivalent to traditional energy supply initiatives. Utility companies like NSTAR and National Grid were now required to purchase all available energy efficiency improvements that cost less than it does to generate power, ultimately saving money for consumers on their electricity bills. Furthermore, utility companies were to offer incentives for customers to upgrade their home products to more efficient models, whenever those incentives cost less than generating the electricity it would take to power their less-efficient equipment; these incentives would encourage more efficient energy use, lowering the overall demand on the system and reducing greenhouse gas emissions.

- Promoting Renewable Energy

The Green Communities Act required utility companies to enter into 10- to 15-year contracts with renewable energy developers to help Massachusetts-based developers of clean energy technology receive financing to build their projects and companies. The law also made further incentives for those consumers with solar-generated power by allowing them to sell their excess electricity back to the utilities at favorable rates.

- The Regional Greenhouse Gas Initiative (RGGI)

The Green Communities Act gave approval to Massachusetts' participation in The Regional Greenhouse Gas Initiative, which is a cap and trade system – also known as emissions trading – that is an administrative approach used to control pollution by providing economic incentives for achieving reductions in the emissions of greenhouse gas.

In a cap and trade system, companies are issued emission permits and are required to hold an equivalent number of allowances that represent the right to emit a specific amount. The Regional Greenhouse Gas Initiative called for almost all of the emissions to be auctioned; the proceeds would go toward funding Green Communities, providing no-interest loans for municipal energy efficiency projects, and promoting energy conservation.

The Global Warming Solutions Act and The Green Jobs Act

The Global Warming Solutions Act and Green Jobs Act were passed together in August 2008 and added depth to the Green Communities Act. The Global Warming Solutions Act required the reduction of greenhouse gas emissions by 80% from 1990 levels by 2050, with a reduction of up to 25% by 2020. In correlation with the Green Jobs Act, this legislation was passed in the hope of fostering innovation and development in clean energy technologies in the state's economy.

To facilitate the innovation and economic development necessary to meet those mandates, the Green Jobs Act was enacted to support development of the clean energy technology industry. Spurred by the lobbying of the NECEC and other organizations for more seed grant funding for local business owners and innovators who needed the financial backing to develop and implement their clean-energy products and companies, the legislation called for \$68 million in seed grant funding over five years for companies, universities, and non-profits, as well as for workforce development grants to state higher education, vocational schools, and non-profits. The grants would stimulate clean energy research and new venture creation.

A Profile of The Panelists:

Mitch Tyson, CEO, Advanced Electron Beams

Mitch Tyson joined Advanced Electron Beams as CEO and Director in October 2005, upon the completion of the company's Series A round of venture funding.

Advanced Electron Beams (AEB) has developed one of the world's most efficient and clean forms of industrial energy. AEB captures the power of electron beams in a cost-effective, compact form factor, enabling customers to use this clean energy source in industrial applications ranging from surface sterilization to pollution abatement to printing and polymer treatment and beyond. Prior to joining Advanced Electron Beams, Mitch was a corporate consultant and lecturer, serving on multiple industry, government, and corporate boards of directors, and advising start-up organizations and venture capital firms.

Before working as a consultant, Mitch was the CEO of PRI Automation, a publicly traded corporation that supplied automation systems including hardware, software, and services for the semiconductor industry. From 1987 to 2002, he held positions of increasing management responsibility, and helped transform PRI Automation from a small robotics manufacturer to the world's leading supplier of semiconductor fab automation systems. Mitch managed the growth of the company from \$4 million to more than \$300 million in revenue, and guided the company through its successful IPO.

Previously, Mitch worked at GCA Corporation and served as science advisor and legislative assistant for energy to U.S. Senator Paul Tsongas.

Mitch is a cofounder of the New England Clean Energy Council whose mission is to accelerate New England's clean energy economy to global leadership by building an active community of stakeholders and a world-class cluster of clean energy companies. Mitch serves on the Executive Committee and heads the CEO Council. Mitch also serves on the executive and governing boards of John Adams Innovation Institute, a quasi-public state agency focused on promoting high tech economic development in Massachusetts, the Mass High Technology Council Board, UMASS High Tech Executive Council, the Massport Security Advisory Council and the Board of the Progressive Business Leaders Network. Mitch also serves on the Board of the New England Regional ADL and on the Northeast Council of the Union for Reform Judaism.

Mitch also serves on the board of Photonics, Inc., a manufacturer of photomasks for the flat panel display and semiconductor industries.

He has a Bachelor of Science in physics, a Master of Science in nuclear engineering, and a second Master of Science in political science, all from the Massachusetts Institute of Technology.

Phil Giudice, Commissioner, Massachusetts Department of Energy Resources (DOER)

Commissioner Giudice brings diverse and expansive experience to DOER. He is a geologist (B.S. from the University of New Hampshire and M.S. in economic geology from the University of Arizona) and management professional (M.B.A. from Tuck School of Business at Dartmouth) with more than 30 years experience in the energy industry.

Commissioner Giudice serves as board member, board executive committee member, and treasurer of the Regional Greenhouse Gas Initiative, Governing Board chair for the Massachusetts Renewable Energy Trust, leadership group member for the National Action Plan for Energy Efficiency, vice chair for the National Council on Electricity Policy, and a board member of the Commonwealth's Energy Facilities Siting Board.

Prior to joining DOER, Commissioner Giudice served as Senior Vice President at EnerNOC, a start-up company providing electricity demand-management services to businesses, institutions, utilities, and grid operators. The Commissioner was also a Senior Partner, and leader of Mercer Management Consulting's global energy utilities practice.

Commissioner Giudice is also active in the non-profit realm. He is board chair of the Center for Effective Philanthropy and serves on the President's Council of ACCION. Previously, he served full terms on the boards of City Year Boston, First Parish Church of Wayland (Unitarian Universalist), Haitian Health Foundation, and was the founding chair of Boston Cares.

Lori Ribeiro, Senior Consultant, Blue Wave Strategies

Lori is a Senior Consultant at BlueWave Strategies. She has more than 21 years of professional experience, with the past 15 years focused on environmental and energy issues. She brings to BlueWave a rich background in solar and wind project development, strategic planning, brownfields redevelopment, municipal program development, community outreach and education, management and environmental consulting, public financing, and environmental policy.

For the past ten years, Ms. Ribeiro has been advising public and private clients as an independent practitioner in the fields of brownfields redevelopment, renewable energy and energy efficiency.

She recently completed a project for the City of Brockton where she led the development of a 425-kilowatt “Brownfield to Brightfield” project. The Brockton Brightfield is a solar energy generating station developed on a former manufactured gas plant site. It is the largest solar power plant in New England and the largest Brightfield in the United States. She conceived the project, raised \$245,000 in planning/feasibility study grants, directed the feasibility studies, and performed community outreach and public relations.

Her clients have included Varian Semiconductor Equipment Associates, the Aroostook Band of Micmacs, the City of Taunton, the Town of Easton, National Energy Choice, Action for Boston Community Development, Barr Foundation, Boston Lead Action Collaborative, Brockton 21 st Century Corporation, Brockton Area Multi-Services, Inc., Earth Share, Earth Share of New England, Greiner Environmental (Iowa Department of Natural Resources), Louison Child Center, JFYNetWorks, and School for Field Studies.

Prior to becoming an independent consultant, Ms. Ribeiro served as a consultant and researcher for Environmental Futures, the Environmental Careers Organization, Harbor Research Corporation, and First Market Research. She has presented at numerous national and regional conferences on brownfields and renewable energy and served on the Massachusetts Renewable Energy Trust’s “PV Collaborative,” an advisory group to develop Agency policy for photovoltaics programs. The Metro South Chamber of Commerce named Ms. Ribeiro its “Entrepreneur of the Year” in 2000.

Ms Ribeiro is a graduate of Harvard College and received her Master of Science in Environmental Policy from the Massachusetts Institute of Technology. Her thesis was entitled, “Does it have to be so complicated? Municipal renewable energy projects in Massachusetts.”