

EBC Energy Resources Program Energy Storage Comes to Massachusetts - Next Steps and Beyond

Tuesday, November 29, 2016

Brown Rudnick LLP | Boston

AGENDA

8:00 a.m. Welcome: John Wadsworth, Chair, EBC Energy Resources Committee Partner, Brown Rudnick LLP

Introduction: Dwayne Breger, Program Chair and Moderator Director, UMass Clean Energy Extension

8:15 a.m. Administration Perspective: The Role of Energy Storage in Advancing Our Clean Energy Future



Judith Judson, Commissioner
Department of Energy Resources
Executive Office of Energy & Environmental Affairs
Commonwealth of Massachusetts

9:00 a.m. Programs and Policies to Advance Energy Storage

- Kavita Ravi, Director of Strategic Analysis, MassCEC
- Will Lauwers, Director, Emerging Technology, MassDOER
- 9:45 a.m. Networking Break

10:15 a.m. What to Look Forward to and What's Needed – Storage Industry Perspectives

- Doug Alderton, Director Sales, NEC Energy Solutions
- Michael Singer, Principal, Brightfields Development LLC
- Betty Watson, Director Policy and Electricity Markets, SolarCity

11:00 a.m. Getting Price Signals Right – Current Rules and Future Considerations

- Andrew Kaplan, Partner, Pierce Atwood LLP
- Chris Parent, Director, Market Development, ISO New England Inc.
- Peter Zschokke, Director of Regulatory Strategy, National Grid
- 11:45 a.m. Open Q and A
- 12:00 p.m. Closing Remarks Adjourn Dwayne Breger

PROGRAM CHAIR

Dwayne Breger, Director UMass Clean Energy Extension University of Massachusetts, Morrill 1, Room 443N, Amherst, MA 01003 413-545-8859 | Cell: 413-218-3985 | dbreger@umass.edu

Dwayne Breger is an Extension Professor in the Department of Environmental Conservation at UMass Amherst where he is the Director of the Clean Energy Extension. Building on the University's historic role in extension services, the Clean Energy Extension was started in 2015 to strategically advance market applications of clean energy in Massachusetts through outreach, technical assistance, and applied research. Dwayne came to UMass after 13 years as the Director of the Renewable Energy Division at the Massachusetts Department of Energy Resources (DOER). At DOER, he was responsible for the state Renewable Portfolio Standard (RPS), the development of the RPS solar carve-out and solar loan program, the advance of biomass energy policy, and served on the staff working group that designed the Regional Greenhouse Gas Initiative. Prior to DOER, he was an Assistant Professor in engineering at Lafayette College, and served as a U.S. Participant in the International Energy Agency Solar Heating and Cooling Program. Dwayne returned to the UMass campus where he received his Ph.D. in Resource Economics and served as a Senior Research Associate in Mechanical Engineering between 1988 and 1994. Dwayne received his B.S. degree in engineering from Swarthmore College, and an M.S. in technology and policy from MIT.

KEYNOTE SPEAKER

Judith Judson, Commissioner
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020, Boston, MA 02114
617-626-7332 | judith.judson@state.ma.us | www.mass.gov/doer/

Jane May, Executive Assistant to the Commissioner 617-626-7332 | Jane.May@state.ma.us

Judith Judson was appointed as Commissioner of the Department of Energy Resources in April 2015. Prior to joining the DOER, Judith worked at Customized Energy Solutions as Director of Emerging Technologies for the U.S. where she advised clients on the use of innovative technologies to cost-effectively modernize the US electric grid. Judith joined Customized Energy Solutions from Massachusetts-based clean energy technology company, Beacon Power LLC, where she served as Vice President of Asset Management and Market Development. As a nationally recognized expert on energy storage, Judith has participated in numerous hearings and technical conferences at the Federal Energy Regulatory Commission and the U.S. Department of Energy.

Judson chairs the Massachusetts Energy Efficiency Advisory Council and represents Massachusetts on the Boards of the Regional Greenhouse Gas Initiative Inc.; and Massachusetts Clean Energy Center.

Previously Judith served as Chairman and Commissioner of the Massachusetts Public Utilities Commission during the Romney Administration. She holds an M.B.A. from Harvard Business School and a Bachelor's degree in Mechanical Engineering from Kettering University.

SPEAKERS

Doug Alderton, Director of Sales NEC Energy Solutions 155 Flanders Rd, Westborough, MA 01581 508-497-7105 | Cell: 603-391-2817 | dalderton@neces.com

Doug Alderton was brought in as the U.S. Eastern Region Director of Sales at NEC Energy Solutions, a Westborough Massachusetts based energy storage company, in February of 2016. Prior to joining NEC, Doug worked at Vionx Energy Corporation, Massachusetts based flow battery company, as the Director of Marketing & Sales where he managed all client relationships and marketing activities related to launching a United Technology Corporation licensed vanadium-based energy storage technology into the grid marketplace. Doug joined Vionx Energy from Premium Power Corporation another Massachusetts based zinc-bromine flow battery company, where he served as Director of Sales starting in December of 2007.

Doug has been a leader in the grid energy storage space since 2007 and in the clean energy industry since 1996 with his time at AeroVironment, Azure Dynamics, Solectria Corporation and at the New Jersey Department of Energy and Environment. In 1998 Doug started a free youth soccer program in Charlestown, Massachusetts with the help of local community leaders, that helped the formation of "Soccer for Kids' Sake," a non-profit soccer program in 1999 for underprivileged inner city kids where he served as a board member until 2001. Doug also served as a board member of the New Hampshire Granite State Clean Cities Coalition from 2004 through 2014.

Doug is a dedicated husband and a proud father of two and holds a Bachelor of Science degree in Resource Economics from the School of Natural Resources at the University of Vermont.

Andrew O. Kaplan, Partner

Pierce Atwood LLP 100 Summer Street, Boston, MA 02110 617-488-8104 | akaplan@pierceatwood.com

Andrew Kaplan is a partner at Pierce Atwood LLP where he focuses his legal practice on providers of energy storage in wholesale and retail markets. Since 2006, Andrew has assisted energy storage companies with developing, financing, contracting and permitting of on- and off-grid projects within the United States and internationally. He has also represented clients before FERC and state PUCs advocating successfully for the implementation of regulations and policies that allow storage onto the grid and for compensation mechanisms designed to pay each resource for the value it provides to the grid.

Andrew is the director and counsel of the Massachusetts Working Group, as sponsored by the Energy Storage Association. Andrew is the former general counsel and chief of staff of the Massachusetts Department of Public Utilities.

Will Lauwers, Director, Emerging Technology Massachusetts Department of Energy Resources 100 Cambridge Street, #1020, Boston, MA 02114 617-626-7327 | Will.Lauwers@state.ma.us

Will Lauwers is Director of the Emerging Technology Division at the Massachusetts Department of Energy Resources. The Division focus includes energy storage, energy resiliency, and alternative transportation technologies. Will's past experience includes federal, military, and commercial contract

program management with a concentration on research, development, and demonstrations of advanced power technologies.

Will holds an M.S. in Materials Engineering from the University of Dayton and a B.S. in Mechanical Engineering from Worcester Polytechnic Institute.

Chris Parent, Director, Market Development ISO New England Inc.
One Sullivan Road, Holyoke, MA 01040-2841 413-535-4000 | cparent@iso-ne.com

Mr. Parent is Director of Market Development at ISO New England. In his role, he is responsible for the design and development of changes to the New England wholesale electricity markets. He has been with the ISO since 2004 having held various positions responsible for ensuring timely and accurate settlement of the markets, analyzing market outcomes, implementing market solutions and overseeing quality management programs before taking over his responsibilities in Market Development six years ago.

Prior to joining the ISO, Mr. Parent worked for Accenture (formally Andersen Consulting) in their energy practice, primarily focused on the electricity sector. He was responsible for developing business and technology solutions to implement Independent System Operator and Regional Transmission Organization market designs and he also worked with a number of energy industry firms to enhance their trading and back office processes and enable them to better integrate with the ISO/RTO markets.

Mr. Parent holds a B.S. in Business Administration with a minor in Computer Science from St. Michael's College in Vermont.

Kavita Ravi, Director of Strategic Analysis Massachusetts Clean Energy Center 63 Franklin Street, Boston, MA 02110 617-315-9364 | KRavi@MassCEC.com

Dr. Kavita Ravi is the Director of Strategic Analysis at the Massachusetts Clean Energy Center (MassCEC) where she leads strategic analysis to help inform the clean energy industry in Massachusetts and MassCEC in its mission to accelerate the success of clean energy technologies, companies and projects in Massachusetts. As part of this role, she is responsible for analyses related to the clean energy industry, including the recent energy storage study. In addition to analyses, she supports universities and companies in their clean energy efforts, including leveraging funding opportunities. Prior to this, she worked with the U.S. Department of Energy and Lawrence Berkeley National Laboratories on microgrids and energy access issues. She also served as a Fellow of the American Association for the Advancement of Science at the U.S. Department of Energy where she led market transforming programs to promote energy efficiency. Dr. Ravi has a Ph.D in Computer Engineering from the University of Colorado at Boulder and worked for several years in the private sector commercializing the technology of her doctoral research.

Michael E. Singer, Principal Brightfields Development LLC 40 Walnut Street, Suite 301, Wellesley, MA 02481 860-216-2293 | Cell: 860-214-7195 | msinger@brightfieldsllc.com

Michael Singer is President of Brightfields and oversees all project development efforts. He is responsible for managing all solar projects completed by Brightfields and is actively involved in the

execution and structuring of new transactions. Mr. Singer has over 20 years' experience in project and program management in the renewable energy, real estate and environmental fields. He has specialized experience as a principal in the purchase, remediation, development, and resale of environmentally impaired properties, specifically focusing on integration of remedial strategies with real estate development goals. He has also worked with retail, industrial and commercial end users at both Trammel Crow Company and the Sapient Corporation to consistently deliver complex projects. Mr. Singer's unique skillset provides proven experience to seamlessly coupling redevelopment priorities with environmental restoration work. Mr. Singer has a BS in Civil Engineering from Union College.

Betty Watson, Director – Policy and Electricity Markets SolarCity 601 13th Street NW, 9th Floor N, Washington, DC 20005 818-519-0818 | ewatson@solarcity.com

Betty Watson is Deputy Director of Policy and Electricity Markets at SolarCity. Ms. Watson's work includes policies for battery storage, microgrids, and utility business models for distributed resources, particularly on the east coast. Before joining SolarCity, Ms. Watson worked in the Office of Energy Policy and Innovation at the Federal Energy Regulatory Commission, where she advised the Commission on wholesale electricity markets and transmission policy. Prior to that, she completed an Energy and Environment Fellowship with the Regulatory Assistance Project, working on energy regulatory issues in the United States, European Union, China, and India. She received her Master of Environmental Management degree, in the Energy Concentration, from The Nicholas School at Duke University.

Peter Zschokke, Director of Regulatory Strategy National Grid 40 Sylvan Road, Waltham, MA 02451 781-907-1609 | Peter.Zschokke@nationalgrid.com

Peter Zschokke is Director Regulatory Strategy for National Grid, an international energy company with gas and electric utilities in the Northeast. In this role, Peter is a recognized expert in regulatory issues with a current focus on grid modernization, Smart Grid design and pricing, New York's Reforming Our Energy Vision docket and distribution rate design. He represents National Grid before the Department of Public Utilities in its Grid Modernization proceeding as the Company's policy spokesperson.. He represents the Company in developing company strategy and Joint Utility comments in the New York Public Service Commission's Reforming Our Energy Vision. Recently, Edison Electric Institute invited Peter to be one of their strategic advisor with regards to industry Grid Modernization.

Peter has testified as an expert on Time Variant pricing, demand response, capital trackers, cost allocation, cost recovery and management audits. Peter is a graduate of Boston University with degrees in Economics.

Upcoming EBC Programs

- Dec 1: EBC Annual Winter Garden Party, Boston
- Dec 6: Energy Resources Program Briefing by the DOER Division Directors
- Dec 6: EBC Annual Rhode Island Holiday Party, Providence
- Dec 8: EBC Annual New Hampshire Holiday Party, Manchester