EBC Energy Resources Program  
Wind Turbine Acoustics and Noise Policy Update  
Tuesday, October 4, 2016  
Pierce Atwood LLP  
100 Summer Street  
Boston, MA  

AGENDA  

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

Introduction: Michelle N. O'Brien, Program Chair and Moderator  
Partner, Pierce Atwood LLP  

8:10 a.m.  Findings from the MassCEC / MassDEP Research Study on Wind Turbine Acoustics  
• Robert D. O’Neal, CCM, INCE, Principal, Epsilon Associates, Inc.  

8:40 a.m.  Update on MassDEP Noise Policy and Regulation Development  
• Bethany A. Card, Deputy Commissioner for Policy and Planning, MassDEP  
• Laurel A. Carlson, Chief of Data Systems Development,  
  Bureau of Air and Waste, MassDEP  

9:15 a.m.  Q&A Forum  
Moderator: Michelle O’Brien, Pierce Atwood LLP  

Panelists:  
• Laurel Carlson, MassDEP  
• Bethany Card, MassDEP  
• Rob O’Neal, Epsilon Associates, Inc.  

10:00 a.m.  Adjourn
Michelle N. O'Brien, Partner
Pierce Atwood LLP
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Michelle N. O'Brien, Esq., is a partner at Pierce Atwood LLP, where she practices environmental and land use law and related litigation. Prior to joining Pierce Atwood in January 2015 Ms. O'Brien spent 15 years at an environmental boutique firm and was an assistant attorney general in both the environmental protection and trial divisions of the Massachusetts Attorney General's Office.

Ms. O'Brien handles environmental and land use permitting and related litigation for various types of development. She defends companies in environmental enforcement matters at the federal, state, and local levels. Ms. O'Brien also represents private parties in cost recovery and property damage claims involving releases of oil and hazardous materials and assists clients with real estate transactions involving contaminated properties.

Ms. O'Brien is an appointed member of MassDEP's Waste Site Cleanup Advisory Committee. She is actively involved in, and is a frequent speaker at, various industry organizations including the Boston Bar Association, LSP Association, and the Environmental Business Council of New England.

Ms. O'Brien has been listed in The Best Lawyers in America® for environmental law and environmental litigation since 2006. She was named one of Massachusetts Lawyers Weekly's “Top Women of Law” for 2015 and is listed in the Bar Register of Preeminent Women Lawyers. Ms. O'Brien is also recognized by Chambers USA, publishers of America's Leading Lawyers for Business, and has been named a Massachusetts Super Lawyer by Boston Magazine each year since 2006.

Bethany A. Card, Deputy Commissioner for Policy and Planning
Massachusetts Department of Environmental Protection
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Beth Card is the Deputy Commissioner for Policy and Planning at the Massachusetts Department of Environmental Protection (MassDEP), a position she has held since March 2015. In this role she leads agency efforts pertaining to regulatory reform and managers priority initiatives related to air, waste, and water. Prior to her current post, in November 2011 she first joined the agency as the Assistant Commissioner for the Bureau of Water Resources (BWR). BWR is responsible for protecting critical water resources by controlling pollution, safeguarding public drinking waters supplies, ensuring public access to the waterfront, and administering revolving loan programs that help the state's towns and cities improve their environmental infrastructure. Among her priority projects, Beth has been coordinating the implementation of revised water management regulations following the Sustainable Water Management Initiative- -an effort that is geared towards balancing competing human needs for water and the long-term health of Massachusetts rivers and streams. Most recently, she has been a part of the MassDEP team working with the Cape Cod Commission and EPA Region 1 on the update to the Section 208 Area-Wide Management plan for Cape Cod.

Prior to joining MassDEP, Beth was the Director of the Water Quality Division for the New England Interstate Water Pollution Control Commission (NEIWPCC), a Congressionally authorized interstate commission that
works with the New England States and New York State on coordinating Clean Water Act and Safe Drinking Water Act programs. Her work at NEIWPCC involved management of several watershed programs such as the Lake Champlain Basin Program. She also worked on many facets of the federal Clean Water Act including the development of Total Maximum Daily Loads (TMDLs), Stormwater Management Programs, Monitoring and Assessment, and Water Quality Standards. As part of her role at NEIWPCC, Beth often represented the states' interests by carefully researching and tracking legislative initiatives and preparing detailed position statements regarding proposed federal policies. In 2009, EPA New England presented Beth with a prestigious Environmental Merit Award for her work on the development of the Northeast Regional Mercury TMDL. The TMDL led to a Clean Water Act §319(g) petition for a mercury conference in order to address mercury impairments resulting from atmospheric deposition. In 2011, she represented the Association of Clean Water Administrators (ACWA) and NEIWPCC when she provided testimony before the United States House of Representatives Subcommittee on Water Resources and Environment, on approaches to developing nutrient criteria. Beth has also served as the co-chair of ACWA's Legal Affairs Task Force since 2006.

Early on in her career, Beth spent several years working for the New Hampshire Department of Environmental Services in the wetlands and source water protection programs. She has a Bachelor of Arts degree from the University of New Hampshire and a Juris Doctorate from the Massachusetts School of Law.

Laurel A. Carlson, Chief of Data Systems Development, Bureau of Air and Waste
Massachusetts Department of Environmental Protection
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Laurel Carlson is currently the Chief of Systems Development and Implementation in the Bureau of Waste Prevention in the Massachusetts Department of Environmental Protection. As such, she oversees the development, implementation and customer support for programs such as the Underground Storage Tank Registration System, the Environmental Results Program Compliance reporting for a wide range of business sectors and is the BAW lead on development of a new Department-wide e-licensing program with current work on design and implementation of On-line Permit Application forms for Air Quality, Hazardous Waste and Solid Waste.

Laurel has worked for MassDEP for 23 years including six (6) years as the Deputy Director for the Division of Air Quality control, three (3) years as Acting Deputy Regional Director in MassDEP's Southeast Regional Office and three (3) years as a Program Evaluation Specialist looking for ways to make MassDEP more effective and efficient as well as guiding improvements in data management and technology. Since 2011 she has been involved in policy issues related to regulation of noise as an air pollutant including noise from Wind Turbine operation. Laurel has expertise in noise compliance assessment of both traditional industrial noise sources as well as wind turbines.

Robert D. O'Neal, CCM, INCE, Principal
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Rob O'Neal is a Principal at Epsilon Associates in Maynard, Massachusetts, and has 29 years of experience in environmental noise measurement and impact assessment studies. Epsilon Associates was part of the research team, along with Resource Systems Group (RSG) and Northeast Wind, who conducted the MassCEC/MassDEP Research Study on Wind Turbine Acoustics.

Rob and his colleagues at Epsilon Associates have been very involved in sound-related topics for utility-scale wind turbines over the past 12 years. They have conducted sound level studies at more than 125 wind
projects in 26 states in the US and Canada. This work included a research effort on low frequency noise and infrasound at operating wind farms sponsored by the largest wind energy developer in North America, NextEra Energy Resources.

Rob was also a member of the MassDEP Wind Noise Technical Advisory Group (WNTAG) which met six times in 2013-2014 to provide technical information for the MassDEP.

Rob received a Bachelors degree from Dartmouth College, and a Master of Science degree from Colorado State University.

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**Upcoming EBC Programs**

- Oct 5: Massachusetts Omnibus Energy Legislation
- Oct 13: Water Resources Meeting with David Ferris, Division of Watershed Permitting
- Oct 13: Construction & Demolition Program – Understanding the Issues Involved in Demolition
- Oct 14: Energy Resources Program – Invasion of the Offshore Wind Turbines
- Oct 20: Connecticut Chapter Program – Managing PCB Impacted Building Materials
- Oct 20: EBC & LSPA Young Professionals Networking Night at Harpoon Brewery
- Oct 21: New Hampshire Chapter Program – Briefing from NH DES Divisional Leadership Team
- Oct 25: Program Series with MassDEP Leadership – Northeast Region Leadership Team
- Oct 27: RI Chapter Program – Windows on Providence – Forward Thinking Development
- Nov 9: Program Series with MassDEP Leadership – Western Region Leadership Team
- Dec 1: EBC 18th Annual Winter Garden Party

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