



US Offshore Wind Collaborative

The mission of the US Offshore Wind Collaborative (USOWC) is to address the technical, environmental, economic and regulatory issues necessary to catalyze the sustainable development of offshore wind energy in the waters of the United States.

State Offshore Wind Initiatives / Proposed Projects

August 2010

State	Proposed Projects	Policy and Regulation	Studies and Research and Development
Maine	Proposed RFP for a 25 MW pilot project with floating turbines in at least 300 feet of water, subsidized by state utilities (RFP expected for September 2010)	<p>State vote approved bond measure to provide \$11 million for deepwater wind research (June 2010)</p> <p>Governor's Task Force on Wind Power Development issued legislative recommendations subsequently enacted in 2008, including goal of 300 MW offshore wind energy by 2020</p>	<p>University of Maine hosts AEWC Advanced Structures and Composites Center, received \$12.4 million in federal stimulus funds to build 37,000 square foot Offshore Wind Laboratory</p> <p>University of Maine a founding member of DeepCWind Consortium; committed to advancing deepwater offshore wind technology</p>

<p>Maine (cont.)</p>	<p>Proposal for establishment of deepwater offshore wind test beds in ME state waters; siting process identified 3 demonstration sites</p> <p>Working with Statoil and other technology developers</p>	<p>Ocean Energy Task Force formed 2008; first component of their mission statement involves offshore wind development</p>	<p>DOE committed \$20 million to development of deepwater offshore wind technology; Maine expected to receive a large portion of this funding</p>
<p>New Hampshire</p>	<p>NH has very little coastline, so interest in offshore wind lies in developing siting criteria, research, and technology testing for other states</p>	<p>NH currently has expedited on-shore wind permitting and a “one stop” process for general energy siting that could be models for offshore wind permitting processes in other states</p>	
<p>Massachusetts</p>	<p>Cape Wind: 468 MW proposed project, received federal approval April 2010</p> <p>Hull Offshore Wind Farm: 12-20 MW, 4 turbine proposed project</p>	<p>Governors of MA and RI signed a MOU regarding sharing economic benefits from offshore wind development in waters near the state boundary (July 2010)</p> <p><i>Massachusetts Ocean Management Plan</i> identifies 2 areas in state waters for utility scale offshore wind development (December 2009)</p> <p>MA Renewable Energy Trust placed under jurisdiction of Massachusetts Clean Energy Center (2009)</p>	<p>Massachusetts-NREL (National Renewable Energy Laboratory) Wind Technology Test Center under construction in Charlestown; original \$2 million federal grant (2007), followed by \$25 million from American Recovery and Reinvestment Act (2010)</p> <p><i>Strategic Options for Investment in Transmission in Support of Offshore Wind Development in Massachusetts</i>, MA Clean Energy Center (December 2009)</p> <p><i>Port and Infrastructure Analysis for Offshore Wind Energy Development</i>, MA Clean Energy Center, 2010 (not yet publically available)</p>

<p>Massachusetts (cont.)</p>		<p>Green Communities Act (2008): requires utilities to enter into 10-15 year power purchase agreements with alternative energy developers; increases state RPS by 1% per year with no cap (15% by 2020, 25% by 2030, etc.); enters MA into Regional Greenhouse Gas Initiative</p> <p><i>Waves of Change, MA Ocean Management Task Force, 2004</i></p>	<p>University of Massachusetts Wind Energy Center received \$243,000 from DOE to develop graduate level course in Offshore Wind Energy Systems Engineering</p>
<p>Rhode Island</p>	<p>Deepwater Wind chosen in September 2008 to develop an offshore wind farm to meet at least 15% of RI's electricity needs; Phase I will be 20 MW project in state waters near Block Island; Phase II will be 100+ turbine facility in federal waters</p> <p>Port facility at Quonset, RI received \$22 million from Department of Transportation for port upgrades, intended to support offshore wind development and other port uses (2010)</p>	<p>Governors of MA and RI signed a MOU regarding sharing economic benefits from offshore wind development in waters near the state boundary (July 2010)</p> <p>RI legislature passed bill requiring power purchase agreement to be made for the Deepwater Wind project (June 2010)</p> <p>RPS: 16% renewable by 2020</p>	<p>Rhode Island Special Area Management Plan: \$3.2 million 2 year ocean planning initiative, findings will determine siting of Deepwater Wind project</p> <p>MOU between RI Office of Energy Resources and URI provided \$200,000 for establishing URI Partnership for Energy and a Center of Excellence for Research on Offshore Renewable Energy (2008)</p> <p><i>Rhode Island Offshore Wind Stakeholders Final Report, Peregrine Energy Group Inc, 2008</i></p> <p><i>RIWinds Phase I: Wind Energy Siting Study, Applied Technology & Management, 2007</i></p>

<p>New York</p>	<p>Long Island-New York City Offshore Wind Project: 350 MW proposed project by Long Island Power Authority and Consolidated Edison Inc.; issued RFI July 2009</p> <p>New York Power Authority: RFP in December 2009 for 120-500 MW project in the Great Lakes; 5 proposals submitted and are currently under review</p>	<p>RPS: 29% renewable by 2015</p> <p>Governor’s Office directed state agencies to work with Great Lakes Wind Collaborative to create framework for offshore wind development</p> <p>Long Island Power Authority and Consolidated Edison Inc. conducted offshore wind feasibility study/resource assessment; concluded that 700 MW of offshore wind energy possible with existing transmission infrastructure (2008)</p>	<p><i>New York’s Offshore Wind Energy Development Potential in the Great Lakes: Feasibility Study</i>, New York State Energy Research and Development Authority (NYSERDA), April 2010</p> <p>Long Island Power Authority and Consolidated Edison established a Wind Collaborative that includes NYSERDA, New York Power Authority, New York City Economic Development Corporation, Metropolitan Transit Authority, New York-New Jersey Port Authority, and others</p>
<p>New Jersey</p>	<p>Garden State Offshore Energy: 350 MW proposed project, \$19 million, 5 year production tax credit from NJ</p> <p>Bluewater Wind: 350 MW proposed project supported by state, received \$4 million state rebate for constructing a met tower which should be operational in 2010</p>	<p>Offshore Wind Economic Development Act: provides up to \$100 million in tax credits to offshore wind developers (June 2010)</p> <p>Met tower rebate program: provides \$4 million to qualified developers for met tower construction (2008)</p> <p><i>New Jersey Energy Master Plan</i>, 2008</p> <p>Stated goals of 1,000 MW of offshore wind energy by 2012, 3,000 MW by 2020</p>	<p>\$7 million baseline ecological study completed June 2010 (expected to be made public in July), projected that offshore wind development would result in “negligible impacts to bird, fish and marine mammal life”</p> <p><i>New Jersey Offshore Wind Energy Feasibility Study</i> , NJ Board of Public Utilities, 2004</p> <p>New Jersey Clean Energy Program formed in 2003 to support state clean energy goals www.njcleanenergy.com</p>

<p>New Jersey (cont.)</p>	<p>Fishermen’s Energy (“a consortium formed by principals of East Coast fishing companies”): met buoy operating at site of proposed 20 MW project, to be followed by 330 MW project</p>	<p>RPS of 30% renewable by 2020 (offshore wind central to this goal)</p> <p><i>Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters Final Report to Governor Jon S. Corzine, Blue Ribbon Panel, 2006</i></p>	
<p>Delaware</p>	<p>NRG Bluewater Wind: 450 MW proposed project approximately 13 miles from coast, drafted PPA with Delmarva Power</p>	<p>Governor’s Energy Advisory Council is preparing Delaware Energy Plan for 2009-2014</p> <p>Determination that Renewable Energy Credits produced by Bluewater Wind project would count 3.5 times toward utilities’ renewable energy obligations</p> <p>RPS: 20% renewable by 2019</p>	<p>Announcement that University of Delaware will partner with National Renewable Energy Laboratory (NREL) in design and testing of offshore wind turbines; comes with \$500,000 over 5 years (June 2010)</p> <p>University of Delaware received a \$99,967 grant from DOE to pursue project called “Empowering Coastal States and Utilities Through Model Offshore Wind Legislation and Outreach”</p> <p>University of Delaware offshore wind regional resource assessment for the Atlantic Bight (MA to NC) completed in 2007</p> <p><i>Assessment of Delaware Offshore Wind Power, University of Delaware College of Marine Studies, 2005</i></p> <p><i>Bright Ideas for Delaware’s Energy Future: Delaware Energy Task Force Final Report to the Governor, Delaware Energy Task Force, 2003</i></p>

<p>Maryland</p>		<p>MD Energy Administration has Request for Expressions of Information and Interest dealing with offshore wind development (2010)</p> <p>Clean Energy Production Tax Credit: 0.85 cents per kWh for facilities operational on or before January 1, 2011</p> <p>RPS: 22.5% renewable by 2022</p>	<p><i>Maryland's Offshore Wind Power Potential</i>, University of Delaware, February 2010</p> <p>MD Energy Administration launching a feasibility study/planning initiative for offshore wind; will include Marine Spatial Planning work done by the administration and The Nature Conservancy</p>
<p>Virginia</p>	<p>Apex Wind Energy Inc. (preliminary/early planning)</p> <p>Seawind Renewable Energy Corp. (preliminary/early planning)</p> <p>Both proposed project sites approximately 12 miles off the VA coast</p>	<p>Virginia Offshore Wind Development Authority formed by the VA General Assembly (April 2010)</p> <p>VCERC received approximately \$1.4 million in state funding to carry out three research projects relating to offshore wind (final report published 2010)</p> <p>\$500 "green jobs tax credit" for each green job created in VA (2010)</p> <p>Virginia Offshore Wind Coalition established in 2009 to increase VA's competitive advantage in offshore wind-related economic development www.virginiaoffshorewind.com</p> <p>South Atlantic Offshore Wind Energy Infrastructure Development Compact (2009)</p> <p>RPS: 15% renewable by 2025 (offshore wind would receive triple credits)</p>	<p><i>Virginia Offshore Wind Studies Final Report</i>, VCERC, April 2010</p> <p>Favorable response from Department of Defense on 18 of the 25 potential wind farm leasing tracts (May 2010)</p> <p>Announcement that VA will host regional office in support of the Atlantic Offshore Wind Energy Consortium (2010)</p> <p><i>Hampton Roads Maritime and Ports Capacity Report</i>, VCERC, July 2009</p> <p><i>Offshore Wind Development Potential and Possible Timetables on Virginia's OCS</i> (PowerPoint), George Hagerman, (2009)</p> <p>Mayor of Virginia Beach formed Mayor's Alternative Energy Task Force (2009)</p> <p>Virginia Coastal Energy Research Consortium (VCERC, www.vcerc.org) formed in 2007 through passage of the VA Energy Plan</p>

<p>North Carolina</p>	<p>Duke Energy and UNC Chapel Hill: proposal to construct up to 3 turbines near Hatteras Island as a demonstration project</p>	<p>Proposed legislation would direct North Carolina Utilities Commission to “facilitate and expedite wind energy pilot projects”</p> <p>Renewable Energy Policy Project, NC State Energy Office, and NC Solar Center formed North Carolina Coastal Wind Working Group</p>	<p>UNC Chapel Hill received \$600,000 (\$300,000 from Progress Energy and \$300,000 from federal stimulus funds) to conduct detailed offshore wind resource assessment and modeling initiative</p> <p><i>Coastal Wind: Energy for North Carolina’s Future</i>, UNC Chapel Hill, June 2009</p> <p><i>Wind Over North Carolina Waters: The State’s Preparedness to Address Offshore and Coastal Water-Based Wind Energy Projects</i>, NC Coastal Resources Law, Planning and Policy Center, 2009</p> <p>\$99,347 DOE grant to NC State University for pursuing “Wind Powering America: The Next Steps for North Carolina”</p> <p><i>Offshore Wind Farm Approval Process, North Carolina</i>, Renewable Energy Policy Project, 2003</p> <p>Preliminary assessment of offshore wind resources through NC State Energy Office</p>
<p>South Carolina</p>	<p>Palmetto Wind: offshore wind initiative supported by Clemson University’s Restoration Institute, Santee Cooper, Coastal Carolina University, and SC</p>	<p>Regulatory Task Force for Coastal Clean Energy established with DOE grant (2008)</p> <p>Santee Cooper stated objective of producing 40% of its energy from non-greenhouse gas emitting sources by 2020</p>	<p>South Carolina Offshore Wind Collaborative (through Clemson University)</p> <p>South Carolina Energy Office wind studies done with Santee Cooper (2005)</p>

South Carolina (cont.)	Energy Office, currently has 6 buoys, 2 land-based stations for wind monitoring		
Georgia	<p>Recommendation from Georgia Tech and Southern Company to build 10 MW demonstration project near Tybee Island</p> <p>Georgia Tech has 3 operational wind monitoring stations</p>	Production tax credit of 1.9 cents per kWh	<p><i>Southern Winds: A Study of Wind Power Generation Potential off the Georgia Coast</i>, Georgia Tech and Southern Company, 2007</p> <p>DOE Wind Powering America grant given jointly to Georgia and South Carolina</p> <p>Extensive information resources available through Georgia Wind Working Group www.gawwg.org</p>
Texas	<p>Baryonyx Corporation awarded two offshore leases in TX state waters (2009)</p> <p>Wind Energy Systems Technology (WEST): proposed 300 MW wind farm off Galveston</p> <p>Texas General Land Office granted leases for 4 additional offshore wind sites to WEST (2007)</p>	<p>TX General Land Office (GLO) has jurisdiction over all projects up to 10 miles offshore</p> <p>GLO conducted first open bidding for offshore wind lease sites (2006)</p> <p>Stated goal of 5,880 MW of wind energy capacity by 2015 (mostly onshore wind)</p>	<p>University of Houston will host Texas-NREL Large Blade Research and Test Facility in Ingleside, given \$2 million from DOE (2007)</p> <p>National Institute for Renewable Energy formed by Innovate Texas Foundation and Texas Tech University System (2009)</p> <p>Texas GLO wind resource mapping</p> <p>The Wind Alliance formed by University of Houston in 2005, and in 2008 signed MOU with 30 stakeholders</p> <p>Texas Wind Energy Institute formed by Texas State Technical College and Texas Tech University</p>

<p>Great Lakes (regional)</p>	<p>See individual states for proposed projects</p>	<p>Great Lakes Wind Collaborative formally adopted by Great Lakes Commission and now has Offshore Wind Working Group www.glc.org/energy/wind/</p>	<p>Great Lakes Commission received \$99,740 grant to pursue “Best Practices to Accelerate Wind Power in the Great Lakes Region and Beyond”</p> <p><i>Great Lakes Wind Atlas, Great Lakes Wind Collaborative</i></p>
<p>Wisconsin</p>		<p>RPS: 25% renewable by 2025, 10% must come from within the state</p> <p><i>Wisconsin’s Strategy for Reducing Global Warming, Governor’s Global Warming Task Force, 2008</i></p>	<p><i>Harnessing Wisconsin’s Energy Resources: An Initial Investigation into Great Lakes Wind Development, report for Public Service Commission of Wisconsin, 2009</i></p> <p><i>Preparation for Offshore Wind in Lake Michigan: Information Solicitation Options for Michigan and Wisconsin, Great Lakes Commission, 2009</i></p>
<p>Indiana</p>	<p>Indiana Department of Natural Resources responded to inquiry about constructing offshore wind farm near the state’s coast</p>		
<p>Michigan</p>		<p>Michigan Great Lakes Wind Council established by state executive order (2009)</p> <p><i>Michigan Great Lakes Offshore Wind Permitting Dry Run Final Report, MI Great Lakes Economic Development Corporation and Great Lakes Renewable Energy Association, 2008</i></p> <p>Clean, Renewable, and Efficient Energy Act, passed in 2008, established RES of 10% renewable by 2015</p>	<p>Grand Valley State University and University of Michigan jointly received \$1.3 million from MI Public Service Commission to collect offshore wind and ice data on Lake Michigan (2010)</p> <p>Superior Watershed Partnership received \$350,000 from MI Public Service Commission for polling public opinion about offshore wind and exploring viability of specific sites (2010)</p>

<p>Michigan (cont.)</p>		<p>MI Wind Working Group created (2002)</p>	<p><i>Report of the Michigan Great Lakes Wind Council, MI Great Lakes Wind Council, 2009</i></p> <p><i>Preparation for Offshore Wind in Lake Michigan: Information Solicitation Options for Michigan and Wisconsin, Great Lakes Wind Collaborative, 2009</i></p>
<p>Ohio</p>	<p>Lake Erie Energy Development Corp. and General Electric issued RFP for proposed 20 MW, \$100 million project off Cleveland</p> <p>Existing water intake structure 3 miles off Cleveland used to collect wind data since 2005</p>	<p>Governor Ted Strickland asked legislature to remove state property tax on wind and solar energy generating equipment</p> <p>Great Lakes Energy Development Task Force (formed 2006) spawned Lake Erie Energy Development Corp. with goal of accelerating offshore wind development from a regional perspective</p> <p>RES: 12.5% renewable by 2025</p>	<p>JW Great Lakes Wind LLC given \$1 million contract by Cuyahoga County Board of County Commissioners to conduct feasibility study for developing a Great Lakes Wind Energy Center (2008)</p> <p><i>Building a New Energy Future: Recommendations for a Lake Erie Offshore Wind Energy Demonstration Project and Research Center, Cuyahoga Regional Energy Development Task Force, 2007</i></p> <p><i>Ohio's Offshore Wind Energy Development Potential: A Preliminary Feasibility Study, AWS Truewind LLC, 2005</i></p>
<p>California</p>	<p>Any offshore projects would likely require floating turbines</p>		<p><i>California Offshore Wind Energy Potential, Stanford University Civil and Environmental Engineering Department, 2007</i></p>