

Profiles for 'Icebreaker' Project Partners

Factsheet

February 15, 2013

LEEDCo (Cleveland)

The Local Non-Profit Organization Leading the Project

Lake Erie Energy Development Corporation (LEEDCo) is a regional non-profit corporation leading efforts to deploy offshore wind projects in Ohio waters of Lake Erie. As a public-private partnership, LEEDCo represents Northern Ohio's public interest in offshore wind and is working to develop an initial 20-30 megawatt (MW) project in Lake Erie seven miles offshore Cleveland with a 1,000 MW target by 2020. Founded in 2009, LEEDCo members include Ashtabula, Cuyahoga, Lorain and Lake Counties, City of Cleveland, The Cleveland Foundation and NorTech. | www.leadco.org

U.S. Department of Energy (Washington, D.C.)

Our Partners in the Federal Government

The Department of Energy has signaled its strong interest in developing an offshore wind industry in the United States by creating a \$168 million cooperative funding program to help complete the first offshore wind projects in the United States. In addition to investing \$4 million in Icebreaker for the first funding period, DOE will be working closely with the LEEDCo team to provide technical oversight and to assist with siting and permitting coordination.

Bayer MaterialScience (Pittsburgh)

The Materials Experts

Bayer MaterialScience is a world leader in material science technology innovation and will be working with LEEDCo to address issues such as ice buildup, environmentally friendly coatings and better performing turbine blades. Bayer has experience working with the Department of Energy, Case Western Reserve University and industrial partners to validate new technologies.

COWI-OCC (Kongens-Lyngby, Denmark, and Trumbull, Conn.)

The Foundation Experts

COWI provides multidisciplinary consultancy regarding the harnessing of wind energy for cost-efficient power production. COWI has been involved in wind energy projects since 1980 and has participated in projects with a total installed capacity of several thousand megawatts. Ocean Coastal Consultants (OCC), a wholly owned subsidiary of COWI North America, Inc., is a U.S.-based engineering firm specializing in offshore design and construction. OCC has been working with Freshwater Wind since 2011 on a separate Department of Energy award to optimize a foundation design for the shallow waters of the Great Lakes region.

DNV KEMA (Oslo, Norway)

The Independent Verifier

DNV KEMA is a global, leading authority in business and technical consultancy, testing, inspections & certification, risk management, and verification along the energy value chain. They are committed to driving the transition toward a safe, reliable, efficient, and clean energy future. They have published a set of offshore wind design standards and have conducted project certification/design verification for 44 offshore wind projects globally.

Eranti Engineering Oy (Espoo, Finland)

The Finnish Ice Experts

Eranti Engineering is a Finland-based engineering company with expertise in arctic, coastal and environmental engineering. Dr. Eranti has been involved in offshore wind farm planning, permitting, and structural design in the Northern Baltic Sea area for the last 15 years. Eranti Engineering has been planning and leading the structural and geotechnical design of our sister project Pori in Finland where a pilot wind turbine is already withstanding ice conditions far worse than those we will face in Lake Erie.

Freshwater Wind (FWW) (Cleveland)

The Project Developer

Freshwater Wind is a project developer in Northeast Ohio that was formed in 2010 with a mission to develop the first freshwater wind project in the Western Hemisphere. The FWW team combines offshore wind project experience with a deep understanding of the Northeast Ohio business environment. After winning LEEDCo's developer RFP, the FWW team has helped orchestrate several key accomplishments for Icebreaker. These accomplishments include negotiating the first submerged land lease with the Ohio Department of Natural Resources, initiating a wind resource characterization and assessment study to complete a preliminary turbine layout, and winning a separate DOE grant to optimize offshore wind systems in the shallow waters of the Great Lakes.

Great Lakes Energy Institute (GLEI) at Case Western Reserve University (CWRU) (Cleveland)

The Local Research Team

A team of researchers from the Great Lakes Energy Institute at CWRU represents the local research arm of the LEEDCo team for the 'Icebreaker' project. GLEI's mission is to enable the transition to advanced sustainable energy generation, storage, distribution and utilization, through coordinated research, development, and education. Led by CWRU's Prof. Matthiesen, the GLEI 'Icebreaker' team has been collecting and analyzing data on Lake Erie wind and ice conditions and will be assessing the geotechnical characteristics of the lakebed to determine ideal sites for the turbines. Their research is furthering the LEEDCO team's goal to identify innovative engineering methodologies that will lower the levelized cost of offshore wind energy.

McMahon DeGulis LLP (Cleveland)

The Ohio Regulatory Experts

McMahon DeGulis is a Northeast Ohio environmental and regulatory law firm with deep ties to Cleveland's sustainability community. Led by 2013 Environmental Lawyer of the Year Dave Nash, the McMahon DeGulis team is directing the efforts to evaluate the impacts of wind energy development on the environment, sensitive habitat, endangered or threatened species, and historic sites. They are engaging federal and state regulators to ensure that Icebreaker complies with all permitting requirements.

National Renewable Energy Laboratory (NREL) (Golden, Colo.)

The National Research Team

NREL is the national research arm of the LEEDCo team. Its mission is to help advance the technical development of large-scale deployment of wind power by improving wind plant power production and reliability, reducing capital costs and operation and maintenance costs, and eliminating barriers to large-scale deployment. NREL is helping to optimize the turbine layout and designing the cost analysis system.

Offshore Design Engineering Ltd (ode) (Surrey, England, and Parker, Colo.)

The English Offshore Wind Power Experts

ode is an independent engineering, construction and project management contractor with more than three decades of experience in the offshore oil and gas industry and 12 years of experience in offshore wind. Having managed some of the largest and most innovative offshore wind projects in the UK, ode brings practical, firsthand experience to the LEEDCo team.

Project Management Consultants (PMC) (Cleveland)

The Local Project Manager

PMC is a Cleveland-based multi-disciplinary project management team consisting of seasoned construction, design, finance and real estate professionals, including licensed architects, engineers, construction managers, financial strategists and experienced construction lawyers. PMC provides four primary areas of service to the construction industry: owner's representative, project and risk management consulting, design and construction partnering facilitation, and mediation and public and private financing consulting. Project Management Consultants is a wholly owned and fully integrated subsidiary of Thompson Hine LLP, a national law firm headquartered in Downtown Cleveland. PMC has managed many of Cleveland's most noteworthy construction projects such as Flats East Bank Development, Cleveland Medical Mart and Convention Center, and the Museum of Contemporary Art (MOCA).

SIEMENS, (Berlin and Munich, Germany, and Boston)

The Turbine Experts

Siemens is a leading supplier of wind power solutions for onshore, offshore, and coastal sites. The company holds the #1 position in offshore wind power globally with almost 1,000 wind turbines and a combined capacity of approximately 3,000MW's installed over the last 20 years. Siemens turbines have dominated the European offshore wind market partly because of their unsurpassed reputation for reliability and performance. With nine U.S. wind power locations, including two manufacturing facilities and a Boston-based offshore wind team, Siemens has signaled its strong commitment to the U.S. wind industry.

URS Corporation (Cleveland)

NEPA and Environmental Permitting Specialists

URS is one of the nation's largest professional service organizations whose staff of over 56,000 employees boasts some of the most distinguished and experienced representatives of the environmental, engineering, and architectural professions. They provide consulting services for all aspects of renewable energy development, from feasibility and environmental studies through detailed engineering to construction and commissioning. With 600 employees in Cleveland and 2,000 employees throughout Ohio, URS is deeply committed to the responsible development of our community. They have been providing environmental services on energy projects for more than 65 years and have been deeply involved in several note-worthy renewable energy projects throughout Ohio such as the Lincoln Electric Wind Energy Project, Timber Road II Wind Project, and Turning Point Solar Project. URS will be working with McMahan DeGulis to complete National Environmental Policy Act (NEPA) environmental documentation and to obtain all federal and state permits needed to begin construction as soon as possible.