LEEDCo awarded $4 million to launch offshore wind development on Lake Erie
By Teresa Dixon Murray, The Plain Dealer on December 12, 2012

CLEVELAND, Ohio --In one of the first projects of its kind in the United States, the Lake Erie Energy Development Corp. of Cleveland will launch an offshore wind development effort on Lake Erie using $4 million in federal money.

LEEDCo is a nonprofit company working to build wind turbines in Lake Erie.

"This is a great day for Northeast Ohio," said LEEDCo CEO Lorry Wagner. "The grant puts us on a path for proving what we can do."

The U.S. Department of Energy is providing the funding for LEEDCo's initiative, called Project Icebreaker. The project is one of seven to win a federal grant. After a year of development in the high-stakes wind power competition, three of the seven could be chosen to receive up to $47 million each in federal money over four years.

U.S. Sen. Sherrod Brown, Democrat of Ohio, who has pushed for such alternative energy projects for years, said offshore wind could eventually help create thousands of new jobs in Ohio and nationwide.

"These funds mean that we are one step closer to achieving our goal of making Lake Erie home to the first freshwater, offshore wind development in North America," Brown said in a statement.

Brown said LEEDCo, which was created in 2004, has been a leader in the effort to bring offshore wind to Lake Erie. "This award reaffirms Ohio's place as leader in renewable energy manufacturing and use," he said.

LEEDCo plans to install nine wind turbines on "ice breaker" single pole foundations designed to reduce ice loading. The 3-megawatt turbines will be in Lake Eric, seven miles off the coast of Cleveland.

Because it's not very deep and has lots of wind, Lake Eric is considered an optimal location to test offshore wind energy. Brown noted that the world's first electric windmill, designed by Charles Brush, was developed in Cleveland.

The grant will help pay for engineering work, including tower designs, foundation and anti-icing designs, Wagner said.

"The United States has tremendous untapped clean energy resources," U.S. Secretary of Energy Steven Chu said in a statement, "and it is important for us to develop technologies that will allow us to utilize those resources in ways that are economically viable."
"Today's announcement of awards to the first offshore wind projects in the U.S. paves the way to a cleaner, more sustainable and more diverse domestic energy portfolio that develops every source of American energy," he added.

The seven projects will focus on the commercialization of innovative offshore wind technology in the United States. Within about a year, the Energy Department will choose one, two or three projects for further development, in hopes that commercial operation would be in effect by 2017.

LEEDCo's nine-windmill project is the same one that was rejected without comment earlier this year by Third Frontier, which provides money to Ohio technology-based companies, as well as universities, nonprofit research institutions and other organizations.

The windmill project, which is endorsed by the Ohio Department of Development, was initiated by the Cleveland Foundation, NorTech, the city of Cleveland and Lake, Lorain, Ashtabula and Cuyahoga counties to show the potential of wind power. These entities hope the project attracts private funding for additional research.

Supporters believe that, over the long term, energy provided by Lake Erie wind could dramatically affect energy prices and business costs.

Case Western Reserve University is one of LEEDCo's primary partners in the project that will also include industrial collaborators interested in coatings that might reduce icing of the turbine blades as well as corrosion.

According to CWRU, the challenge now is figuring out the details of drilling into the floor of Lake Erie, and then getting the structures out there and getting them to stand upright and stay upright.

The goal, CWRU said, is to build a wind farm that can provide power at the same cost as a traditional electric plant when the cost of construction, maintenance and energy production are averaged over the 20-year life of the wind turbines.

"There are 8,000 parts in a wind turbine and every little thing we can do to reduce the cost or increase the energy produced is in play," David Matthiesen, a professor of materials science and engineering at Case Western Reserve and the research team leader for Project Icebreaker's research and development group, said in a statement.

"We want to put something in the lake that is very do-able," Wagner said. "A lot of other groups are going after monster machines. What we want to do is show that smaller machines are really better. Our machines weigh about 70 tons while other off-shore designs weigh more than 200 tons," he said.

Wagner and others involved in the project plan to release additional details Thursday during a news conference at the Great Lakes Science Center.

Plain Dealer reporter John Funk contributed to this story.