Harnessing Offshore Wind Power: Law School Report Urges Wind Turbines in Lakes Erie and Ontario

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New York State should take advantage of a golden opportunity to become a leader in developing clean, renewable offshore wind power, an alternative energy source that could trigger an economic renaissance and a greener image for the Western New York community, according to a report by a University at Buffalo Law School clinic.

The report, prepared by the school’s Environment and Development Clinic, proposes a strategy that would capitalize on what its co-authors call “enormous” potential to harness offshore wind power.

Continued on page 24
The report outlines a blueprint for developing clean, renewable wind power from turbines located in Lakes Erie and Ontario in a prudent, efficient way that would benefit the public and individual communities. The strategy would create a demand for wind-power energy, as well as large-scale manufacturing of wind power turbines and components in Western New York.

“New York’s Great Lakes offer the potential for clean, renewable energy, as well as an opportunity to develop a new industry for the 21st century,” says Robert S. Berger, UB Law School professor and director of the clinic. “Western New York’s proximity to the Great Lakes, the report states, provides an opportunity to again harness the vast energy potential of wind turbines anchored in the water to meet a full range of regional needs.”

Berger said the opportunity and interest to build their wind turbines in Lakes Erie and Ontario already exist, and stressed others will take advantage of that opportunity whether New York develops a coordinated plan or not. But his report suggests a comprehensive strategy in which New York can systematically determine how and where to put wind turbines in Lakes Erie and Ontario for the greater good of the community and its residents.

“Rather than have the uncoordinated process where private developers just try to place them in whatever way they decide,” Berger says, “we’re advocating a coordinated, comprehensive process that will allow all interested groups—citizens, environmental groups, fishermen—to come together to develop the best environmental and civic plan.”

The report does not recommend how many or where the wind turbines should be built. Instead it points out the vast energy potential of an industry just beginning to have an impact on the state’s energy needs. Berger and UB clinic student Dwight Kanyuck, co-authors of the report, said a similar number of new turbines anchored in the water could produce several times the power generated by the eight turbines now operating at the Steel Winds farm located on the former site of Bethlehem Steel in Lackawanna. The eight turbines of Steel Winds are rated at 20 megawatts of power – 2⁄3 megawatts each – which supply annual power for about 9,900 homes, according to the UB Law team. If more turbines are built, the capacity to produce power increases proportionally. Even if only 10 percent of the wind power potential for Lakes Erie and Ontario was used, about 8,200 megawatts of electricity could be harnessed for private and commercial use, according to Kanyuck.

Professor Robert S. Berger, second from left, with New York State Senator Antoine Thompson, Dwight Kanyuck, an environmental attorney with the Knoer Group, and William Nowak, a 2008 alumnus of UB Law, at a news conference releasing the report.

That's more than 400 times the capacity of the eight turbines operating at Steel Winds, enough power to meet the annual needs of about 360,000 homes, using the existing scale of demand. Eighty-two hundred megawatts would be equivalent to adding the renewable energy capacity of more than three power plants the size of the Robert Moses Niagara Hydro-Electric Plant, according to the report.

“The level of development would significantly offset the greenhouse gas, sulfur dioxide, nitrogen oxide and mercury emissions associated with coal power generation and provide a stably priced supply of energy for years to come,” the report states.

But it is unequivocal in its urgency to look at the energy and economic opportunities as soon as possible. The report also designates two agencies—New York State Energy and Research Development Authority and New York State Power Authority—as the groups that should implement the policies. The report also recommends the Wind Action Group, a local wind power organization that asked UB to prepare the report, should act as an educator and advocate to move this plan forward.

“We are excited about the idea of fostering a community-based discussion of how we as a region and state can make the most of this natural resource,” says Robert Knoer, chairman of the Wind Action Group, “all in harmony with all of our other goals as a state and region.”

There currently are no offshore wind farms operating in the United States. Offshore projects are generating about 1,000 megawatts of power in Europe, according to the UB team. The UB report also urges the state to provide financial incentives and power purchase agreements to encourage the appropriate development of the state’s Great Lakes wind power. “We are suggesting that there actually be a requirement for local content that the state puts in its purchase agreement that would then jump-start a wind turbine manufacturing plant with the associated component parts,” Berger says.

“The Greener Shade of Blue”

Among American colleges and universities, the University at Buffalo is recognized as a leader in reducing energy costs through conservation measures and in promoting alternative energy sources. In 2007, the University highlighted and celebrated its environmental commitment in a semester-long observance, “The Greener Shade of Blue.”

During the semester, President John B. Simpson committed UB to continuing its leadership role in fighting global warming by signing the American College and University Presidents Climate Commitment to achieve “climate neutrality.”

As part of developing a comprehensive physical plan to guide the growth of its North, South and Downtown campuses in conjunction with the UB 2030 strategic plan, UB has created a Committee on Environmental Stewardship, underscoring the fact that environmental stewardship is a University-wide responsibility and effort.

Creating a Public Plan for New York’s Great Lakes Offshore Wind Power

A Strategy for Energy and Economic Development

Executive Summary

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