

Regina McCormack

Abstract

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The Status of Wind Energy on the Great Lakes

Interest for wind projects on the Great Lakes exists for many of the same reasons wind projects are being developed on the outer continental shelf. Population centers are focused along the lakeshores, and the wind resources on the open water are very strong. Development in freshwater systems also introduces unique advantages such as the non-corrosive nature of freshwater and ideal lakebed geology for gravity base foundations. However, freshwater development also includes disadvantages such as ice loading stress and water depth issues. Solutions for such challenges are currently being researched. Another factor distinguishing Great Lakes development from traditional offshore wind is the policy and permitting regime. Unlike the outer continental shelf, the Great Lakes are state-owned waters and submerged lands. Though projects must acquire a Section 10 RHA / 404 CWA permit from the Army Corps of Engineers, much of the permitting occurs on the state level. Federal agencies such as BOEM are not involved. As a result, local politics and public interest greatly influence the permitting structure and therefore the status of Great Lakes wind development. While several proposed projects are scattered within each of the Lakes, Michigan and Ohio are leading in the development process. Michigan's Great Lakes Wind Council has recently submitted a streamlined permitting process that is currently under review. Ohio's Lake Erie Energy Development Corporation is focusing on securing a power purchase agreement and aims to begin construction by 2014. Though Michigan and Ohio have made significant strides, other projects have failed. Recently, Ontario and New York have ceased pursuing Great Lakes development for environmental and economic considerations. Expense is one of the main reasons resistance to Great Lakes development persists. For example, though Ohio is relatively far along in the permitting process, Ohio's Governor Kasich has stated offshore wind is not a priority and is strongly advocating for natural gas drilling. The proposed drilling project will bring an expected 200,000 jobs to Ohio in four years. Compared to the expected 15,000 jobs the wind industry would create over two decades in addition to the higher electric bills consumers are expected to pay, gas drilling is a tough competitor to the Great Lakes wind industry. In conclusion, Great Lakes development is currently focused on streamlining the permitting process and conducting research to mitigate environmental and economic obstacles. The future of wind development depends on these actions as well as the influential positions of Great Lakes stakeholders, local politicians, and their constituents.