



National Renewable Energy Laboratory
Innovation for Our Energy Future



**Research Position for
Literature Review of Offshore Wind Energy Technology and Challenges**

Application Due Date: September 15, 2009. To apply, submit a resume including 3 references, and a cover email explaining your interest in this position to crec.crew@colorado.edu.

Requirements: Masters degree or higher. Open to graduate and postdoctoral students and faculty. Wind energy experience preferred.

Estimated Funding: \$10,000-\$20,000, depending upon experience and period of performance.

Background: In 2008, the Department of Energy (DOE) produced a report [1] highlighting the technical challenges that will need to be addressed in order to produce 20% of the nation's electricity using wind by the year 2030. A significant portion of this wind energy will be placed offshore, where the United States currently has no installed capacity. Much of the background research used in this report came from preliminary studies within an immature industry that has seen significant growth over the last 5 years. With that growth there has also been a vast amount of experience gained both technologically and operationally, so that the information provided in the 20% report needs to be updated.

As a follow up to the 20% wind report, the Department of Energy is currently assembling a new report on the technological barriers for 80% renewable energy penetration in the nation's electrical grid. As with the previous report, a significant portion of this energy will be generated by offshore wind. DOE would like to include the latest results on the actual costs of offshore wind and the challenges facing the offshore wind industry.

Proposed work: Researcher will perform a literature review of offshore wind technology, identify the critical technological issues and possible barriers for large scale deployment, and quantify actual and projected costs. The findings will be summarized in a manner that can be incorporated into the upcoming 80% DOE report.

Deliverables: Final report and presentation - December 1, 2009

[1] DOE. 2008 20% Wind Energy by 2030. DOE/GO-102008-2567, Department of Energy.