

Renewable Energy on the Outer Continental Shelf

In 2009, Department of the Interior (DOI) announced the final regulations for the Outer Continental Shelf (OCS) Renewable Energy Program, which was authorized by the Energy Policy Act of 2005 (EPAAct). These regulations provide a framework for issuing leases, easements and rights-of-way for OCS activities that support production and transmission of energy from sources other than oil and natural gas. DOI’s Bureau of Ocean Energy Management (BOEM) is responsible for offshore renewable energy development in Federal waters and anticipates future development on the OCS from three general sources.

Offshore Wind Energy

Wind turbines have been installed offshore a number of countries to harness the energy of the moving air over the oceans and convert it to electricity. To date, BOEM has 11 active commercial wind energy leases on the OCS, including those offshore Delaware, Maryland, Massachusetts, New Jersey, New York, Rhode Island, Virginia, and North Carolina. BOEM also executed the nation’s first right-of-way (ROW) grant for a renewable energy transmission system offshore Rhode Island in 2014 and the nation’s first research lease for offshore wind in Federal waters in 2015.

Ocean Wave Energy (Hydrokinetic)

There is tremendous energy in ocean waves. Wave power devices extract energy directly from the surface motion of ocean waves. A variety of technologies have been proposed to capture that energy, and some of the more promising designs are undergoing demonstration testing. The Northwestern coast of the United States has especially high potential for wave energy development and is one of only a few areas in the world with abundant, available wave power resources.

Ocean Current Energy (Hydrokinetic)

Ocean currents contain an enormous amount of energy that can be captured and converted to a usable form. Some of the ocean currents on the OCS are the Gulf Stream, Florida Straits Current, and California Current. Submerged water turbines, similar to wind turbines, may be deployed on the OCS in the coming years to extract energy from ocean currents. For example, in June 2014 BOEM issued a lease for marine hydrokinetic testing offshore Florida to evaluate the use of turbines powered by ocean currents. While this lease is no longer active, it represents the first time a lease has been issued to test ocean current energy equipment in Federal waters.



Figure 1: Offshore Wind Leases on the Atlantic