

Cost Modeling for Floating Wind Energy Technology Offshore Oahu, Hawaii

The Bureau of Ocean Energy Management (BOEM) is funding research by the National Renewable Energy Laboratory (NREL) to improve the understanding of the cost of potential offshore wind energy activities for Hawaii. NREL will use the most up-to-date floating offshore wind technology information, cost model input assumptions for the unique Hawaii market, and the Offshore Regional Cost Analyzer model to evaluate floating offshore wind costs for Hawaii on a levelized cost of energy (LCOE) basis. NREL will also produce informational graphics to visualize the current state of floating offshore wind technology. Offshore wind cost information generated by this study will be integrated into a data visualization tool.

BOEM's renewable energy program is supported by a substantial investment in research and data collection. The intent of this study is to evaluate the costs of floating offshore wind in the region surrounding Oahu and provide data visualization to inform Hawaii's energy planning process; it does not propose to develop a specific project or identify specific areas in which a project will be built. Future planning and analysis and leasing activities for offshore wind in federal waters offshore Hawaii will include collaboration with the State of Hawaii and engagement through the BOEM Hawaii Intergovernmental Renewable Energy Task Force. Studies like the Oahu Cost Modeling Study are intended to help inform those potential future activities.

More information on BOEM activities in Hawaii may be found at www.boem.gov/hawaii

Task List & Completion Date Targets

Task 1: Coordination & Interoperability

Coordinate with Hawaii State Energy Office, Hawaiian Electric, and others to determine data requirements for state planning processes. Initial meeting was held December 9, 2020.

Task 2: Customize NREL Cost Model

Updated model assumptions and recent technology trends to be completed by March 9, 2021.

Task 3: Cost Model Results

Complete by April 9, 2021.

Task 4: Engage/Cambium Visualization

Complete by June 9, 2021.

Task 5: Conceptual Floating Graphics

Provide updated floating offshore wind graphics and resource assessment maps by July 9, 2021.

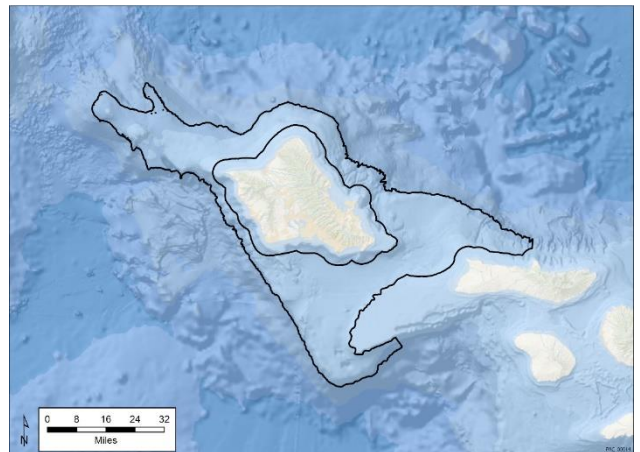
Tasks 6-8: Reporting and Dissemination

Draft Report Available: July 9, 2021

Peer Review Complete: August 23, 2021

Final Cost Analysis Report: October 9, 2021

Study Area



The map above shows the technical resource area within which NREL plans to compute the LCOE to provide geospatial diversity. The area includes Federal waters less than 1300 meters deep excluding marine sanctuaries.

For more information, please contact:

Parker McWilliams:

parker.mcwilliams@boem.gov