BOEM Pacific Region: Ongoing Study

Title	Collection of Metocean Resource Characterization Data off the California Coast (Study #PR-17-MET)
Administered by	Pacific OCS Region
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Principal Investigators(s)	Alicia Gorton (alicia.gorton@pnnl.gov)
Conducting Organizations(s)	U.S. Department of Energy, Pacific Northwest National Laboratory
Total BOEM Cost	$2,089,998
Performance Period	FY 2017–2021
Final Report Due	September 30, 2021
Date Revised	January 16, 2020
PICOC Summary	
Problem	Lack high-definition wind speed data in Call Areas
Intervention	This project will collect high-definition wind speed data in the Call Areas
Comparison	LiDAR data
Outcome	We will have high-definition wind speed data in the Call Areas
Context	Central California, Northern California

BOEM Information Need(s): BOEM Pacific Outer Continental Shelf (OCS) Region is charged with granting leases, easements, or rights-of-way for renewable energy development on the OCS of California. Currently, there is a critical need to document available resources for potential wind energy sites in offshore waters. Specifically, there is a lack of long-term wind speed data at turbine rotor heights. This study will improve knowledge of wind resources on the OCS and aid in leasing decisions.

Background: To inform renewable energy development in the Pacific OCS Region, BOEM has identified a need to obtain certain scientific and technical information. There is a critical need to document available resources for potentially suitable sites for renewable energy development. To fulfill this need, BOEM is seeking scientific and technical services which may include economic and policy analyses on a variety of offshore renewable energy and grid integration topics. The topics may include, but are not limited to, wind resource measurements and evaluation, GIS and resource data analyses, effects on biological resources, and participation in offshore wind and wave energy task force or other related meetings, and providing technical review of offshore renewable energy proposals developed and submitted to BOEM by industry.

Objectives: The purpose of the study is to acquire site-specific metocean data. A question to be answered by this study is: What is the wind regime at specific sites offshore California?

Methods: DOE LiDAR buoys will be deployed off the coast of California. BOEM is funding Pacific Northwest National Laboratory (PNNL) to provide turn-key services to deploy and operate buoys at specific sites within the Humboldt and Morro Bay California Call Areas based on the engineering, siting, and permitting activities performed as part of this work.

Specific Research Question(s):

1. What is the average wind speed and variability in the California Call Areas?

2. Is floating LiDAR a reasonable way for a developer to collect wind data?

Current Status: An interagency agreement with PNNL was awarded on September 18, 2017. Humboldt and Morro Bay Call Areas have been selected as the deployment sites. Permitting and mooring design has been completed for Humboldt and is underway for Morro Bay. Buoys are expected to be deployed in April or May 2020.

Publications Completed: None

Affiliated WWW Sites: None

References: None