BOEM
Bureau of Ocean Energy Management

Renewable Energy
Fact Sheet

The Department of the Interior's Bureau of Ocean Energy Management (BOEM) manages the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources in an environmentally and economically responsible way. The bureau promotes energy independence, environmental protection, and economic development through responsible, science-based management of energy and mineral resources on the OCS.

Offshore Wind Activities and Marine Mammal Protection

At the Bureau of Ocean Energy Management (BOEM), environmental protection—informed by the best available science and law—is a priority and an indispensable consideration in our decision making. Our approach to ocean energy and marine mineral development comes with our unwavering dedication to responsible stewardship, which includes protection of America's ocean environment and marine life.

Questions and Answers

How does BOEM ensure that whales are protected from offshore wind leasing and development activities?
BOEM requires strict protective measures for when the offshore wind industry conducts activities offshore, including:

- Exclusion zones around vessels. Operators must establish an "acoustic exclusion zone" for geophysical surveys, so that the zone is clear of any marine mammals and sea turtles for a certain amount of time before acoustic sound sources can be operated.
- Visual monitoring by trained third-party, independent Protected Species Observers. Protected Species Observers are trained professionals that look for marine mammals so that the possibility of vessel strikes is minimized and to shut down any sound sources if marine mammals are detected within a certain distance.
- Independent reporting by Protected Species Observers during geophysical surveys. Any interactions with protected species are immediately reported to NOAA Fisheries and BOEM.

For more information about these and other protective measures, see: https://www.boem.gov/pdcs-and-bmps-atlantic-data-collection-11222021.

Do offshore wind vessels use seismic airguns for their surveys?
Deep penetration seismic airgun surveys are not used for offshore wind energy projects. These types of surveys rely on high-energy sound pulses aimed at penetrating deep (thousands of meters) into the seafloor to map deep geological features, such as oil and gas deposits.

The offshore wind industry typically uses High Resolution Geophysical (HRG) surveys to assist with their siting efforts. HRG surveys use a suite of active sound sources to produce sounds that are reflected off subsea structures to obtain images of the seafloor and shallow geophysical features.

The sound sources used in HRG surveys are much lower in energy than seismic airguns and have other important characteristics that set them apart from seismic airguns. Scientists from BOEM recently co-authored a scientific paper that describes key physical attributes of HRG sources – such as beamwidth, exposure duration, and frequency – that make them unlikely to result in incidental take of marine mammals. The paper and a video describing its findings can be found on BOEM's website at: https://www.boem.gov/environment/center-marine-acoustics-recent-work#tabs-4126.

BOEM and NOAA Fisheries rigorously assessed the potential effects of HRG surveys associated with offshore wind development in the Atlantic, and the agencies concluded that these types of surveys are not likely to injure whales or other endangered species.

How do HRG surveys affect marine mammals?
BOEM and the NOAA Fisheries have assessed the potential effects of HRG surveys associated with offshore wind development in the Atlantic. Following a rigorous assessment, NOAA Fisheries and BOEM have concluded that these types of surveys are not likely to injure whales or other endangered species.

BOEM requires developers to use protective measures, such as trained Protected Species Observers, to avoid whales during these survey activities.

Where can I find more information about HRG surveys?
The following sources are available for more information on HRG surveys.

- BOEM's Center for Marine Acoustics provides detailed information on HRG surveys. https://www.boem.gov/environment/center-marine-acoustics-recent-work
- BOEM's fact sheet provides a comparison of HRG surveys conducted for offshore wind activities vs seismic airgun surveys done for oil and gas exploration https://www.boem.gov/gandg-overview.

Protected Species Observer using Big Eye Binoculars. Photo by Laura Morse/NOAA