From: Craig Rucker, President
CFACT

To: BOEM and NMFS
Via: https://www.regulations.gov/search?filter=BOEM-2024-0006

Re: Draft Environmental Assessment (Draft EA) for Additional Site Assessment Activities on Beacon Wind, LLC's Renewable Energy Lease OCS-A 0520

Upon reviewing the draft EA referenced above, CFACT has arrived upon the following assessment detailed below:

The activity here is soil testing for the possible use of suction bucket foundations instead of pile foundations throughout the project. We agree that the environmental impact of this testing is likely to be negligible.

However, the Draft EA and the Beacon Wind documentation generally ignore a crucial, environmental-impact issue with the use of suction-bucket foundations. What is ignored is the fact that the use of suction-bucket foundations will eliminate the devastating acoustic impact of monopile foundations, which are also under consideration.

Suction buckets are the perfect acoustic-mitigation technology, as installing them makes very little noise while installing monopiles is incredibly loud. Using them instead of monopiles will avoid the acoustic harassment of many thousands of marine mammals and other protected species. This factor is central to the importance of the proposed testing, and, therefore, its assessment should be included in the EA.

Moreover, BOEM and NMFS should mandate this use of suction-bucket foundations which the Beacon Wind Construction and Operations Plan (COP) does not do.

The Beacon Wind COP Section 2.2.1 (Foundations) reads, "*Piled and suction bucket jackets can be designed for any relevant water depth and wind turbine size and are expected to be suitable for the entire Lease Area. The choice of piles or suction buckets mainly depends on the subsurface conditions.*"

On the contrary, however, the choice of suction buckets should be driven by its powerful mitigation effect over piles. Even if subsurface conditions make the use of suction-bucket jackets difficult, they should still be used if at all feasible. The potential avoidance of multitudes of types of dangerous harassment of protected species makes this choice imperative. This profound mitigation effect includes protecting the severely endangered North Atlantic Right Whale.

Regarding feasibility, there has been extensive research on using suction buckets (also called suction caissons) under difficult soil conditions in the last few years. A literature search finds well over a thousand science and engineering articles on this topic published in just the last four years. These findings need to be addressed before suction buckets are rejected as infeasible, as infeasibility is unlikely to be the case.

More broadly, BOEM and NMFS should mandate that suction-bucket technology be used for all fixed-foundation, offshore wind development instead of piles except where it is completely infeasible, which may be nowhere. At present, it appears that all of the proposed and in-process BOEM offshore wind projects with fixed foundations use deadly-noisy monopiles. This use of monopiles must be replaced with suction-bucket technology due to its quiet installation.

As part of this mandate, NMFS should cease authorizing thousands of types of marine-mammal, acoustic harassment per project from monopolies. It should also rescind all those authorizations where construction is not largely completed. Projects under construction using monopiles can switch to suction-bucket foundations for their remaining turbines and substations.

It should be noted that Ørsted has a 920 MW project off of Taiwan that uses suction-bucket technology for all of the foundations. This exhibits that the technology is suitable for large-scale BOEM projects such as those proposed or in progress off the Atlantic coast and elsewhere.

Suction-bucket technology has been used for decades in the offshore oil and gas industry, so it is well-understood. As an acoustic-harassment-mitigation technology for offshore wind, it is unsurpassed.

Simply put, BOEM and NMFS should ban the use of monopiles in favor of suction-bucket foundations. This ban should include Beacon Wind and be addressed in the subject EA.

Thank you for taking the time to read over our critique and assessment of the draft EA, and it is our hope that you will give this assessment serious consideration before any further action is taken.