



# United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT  
WASHINGTON, DC 20240-0001

Ms. Patricia DiOrio  
Revolution Wind, LLC  
56 Exchange Terrace, Suite 300  
Providence, Rhode Island 02903

Dear Ms. DiOrio:

I am writing on behalf of the Bureau of Ocean Energy Management (BOEM), Office of Renewable Energy Programs, regarding Revolution Wind, LLC's (Revolution Wind) variance request submitted on July 13, 2024, pursuant to lease number OCS-A 0486 Conditions of Construction and Operations Plan Approval (Conditions), condition 5.10.5.e (Pile Driving Restart Procedures for Marine Mammal or Sea Turtle Detections).

Pursuant to condition 1.5, Revolution Wind requested a variance to allow for the use of greater than 20 percent hammer energy when restarting pile driving after a marine mammal or sea turtle detection in those situations where greater energy levels may be necessary to avoid pile refusal and damage to the installation hammer.

In support of the variance request, Revolution Wind states that the variance will enable Revolution Wind to avoid potential marine mammal and sea turtle take that might otherwise occur if, in accordance with conditions 5.10.5.d (Pile Driving Shutdown for Marine Mammals and Sea Turtles) and 5.10.5.e, pile driving cannot be shut down due to the risk of pile refusal. Specifically, Revolution Wind has experienced issues resulting from initiating a soft start with energy levels that are too low to advance the pile after a shutdown has occurred. In these situations, the hammer strikes the pile with an energization level that is within the specified soft start energy parameters, but insufficient to advance the pile, causing the hammer to "jump" and potentially resulting in equipment damage.

In addition to submitting a variance request to BOEM and the Bureau of Safety and Environmental Enforcement (BSEE), on July 12, 2024, Revolution Wind notified the National Marine Fisheries Service (NMFS) Office of Protected Resources (OPR) and Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division of the request in writing. On July 12, 2024, BOEM provided NMFS GARFO its determination that: (1) the change in soft-start protocols does not result in a change to the proposed action that would result in effects to Endangered Species Act (ESA)-listed species not considered in the April 30, 2024, Biological Opinion; and (2) the activity does not require reinitiation under the ESA. In a July 13, 2024, email NMFS GARFO concurred with BOEM's determination allowing Revolution Wind to operate at a higher hammer energy during the soft-start period following a shutdown, specifically greater than 20 percent but less than 100 percent of the maximum hammer energy, and

reinitiation is not required. NMFS OPR concurred with Revolution Wind's request in a July 13, 2024, email.

On July 15, 2023, BOEM, in coordination with BSEE, provided the following provisional concurrence to Revolution Wind via email, which remains effective until BOEM provided its final determination:

Upon re-starting pile driving, soft start protocols must be followed unless not technically feasible to do so, in which case pile driving may restart using hammer energy greater than 20%, but no more than the minimum amount of hammer energy that the Lessee determines necessary to advance the pile without causing damage to the hammer. The hammer energy must be less than the maximum hammer energy.

Revolution Wind requested the variance for re-starting after shutdown from a marine mammal or sea turtle detection (i.e., condition 5.10.5.e); however, BSEE recommended that the variance from the soft start protocol after shutdown could be required in other instances. For example, hammer energy above 20% may be required to safely restart pile driving after a weather or mechanical shutdown. Thus, for its final determination, BOEM evaluated the variance request for condition 5.10.5.f (Soft Start for Pile Driving) instead of restricting the change in protocol to only apply to re-starting after a shutdown from a marine mammal or sea turtle detection.

Pursuant to condition 1.5, BOEM determines that the variance: (1) would not result in a change in the Project impact levels described in the Final Environmental Impact Statement and Record of Decision for the Project; (2) would not alter obligations or commitments resulting from consultations performed by BOEM and BSEE under Federal law in connection with the Construction and Operations Plan approval, in a manner that would require BOEM to reinitiate or perform additional consultation for applicable laws (e.g., ESA, Marine Mammal Protection Act, or Magnuson-Stevens Fishery Conservation and Management Act); and (3) would not alter BOEM's determination that the activities associated with the Project would be conducted in accordance with Section 8(p)(4) of the Outer Continental Shelf Lands Act.

This letter is BOEM's final determination of approval for a variance from condition 5.10.5.f, as follows, with **bold** for emphasis:

Soft Start for Pile Driving (Construction). The Lessee must use a soft start protocol for impact pile driving of monopiles by performing 4–6 strikes per minute at 10 to 20 percent of the maximum hammer energy, for a minimum of 20 minutes. Soft start must be used at the beginning of each day's monopile installation, and at any time following a cessation of impact pile driving of 30 minutes or longer. **If it is not technically feasible to re-start pile driving using hammer energy less than 20%, pile driving may re-start using hammer energy greater than 20%, but not more than the minimum amount of hammer energy that the Lessee determines necessary to advance the pile without causing damage to the hammer or risking safety to personnel. The hammer energy must be less than the maximum hammer energy.** If a marine mammal or sea turtle is detected within or about to enter the applicable clearance zones, prior to the beginning of soft-start procedures, impact pile driving must be delayed until the animal has been

visually observed exiting the clearance zone or until a specific time period has elapsed with no further sightings (i.e., 15 minutes for small odontocetes and 30 minutes for all other marine mammal species and sea turtles).

If you have any questions regarding this matter, please contact Whitney Hauer at (571) 536-8698 or [Whitney.Hauer@boem.gov](mailto:Whitney.Hauer@boem.gov).

Sincerely,

David Diamond  
Deputy Chief for Operations,  
Atlantic Outer Continental Shelf  
Office of Renewable Energy Programs