

Dominion Energy Inc.
600 East Canal Street
Richmond, VA 23219



December 8, 2022

Ms. Jolie Harrison
Permits and Conservation Division, Office of Protected Resources
National Marine Fisheries Service (NMFS)
1315 East West Highway
Silver Spring MD 20910

RE: Coastal Virginia Offshore Wind Commercial Project – Pile Driving During the Month of May

Dear Ms. Harrison,

Virginia Electric and Power Company d/b/a Dominion Energy Virginia (Dominion Energy), is proposing to construct, own, and operate the Coastal Virginia Offshore Wind (CVOW) Commercial Project (Project) in the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Offshore Virginia (Lease No. OCS-A-0483) and in coastal waters where an Offshore Export Cable Route Corridor will be established (Project Area). Dominion Energy's application for a Letter of Authorization (LOA) pursuant to Section 101(a)(5) of the Marine Mammal Protection Act (MMPA) and 50 Code of Federal Regulations (CFR) § Part 216 Subpart I to allow for the incidental harassment of small numbers of marine mammals resulting from survey and construction activities in the Lease area and Offshore Export Cable Route Corridor during the construction of an offshore wind farm was deemed adequate and complete on August 15, 2022.

The LOA application and preceding coordination with the National Oceanographic and Atmospheric Administration National Marine Fisheries Service (NMFS) since the inception of the Project have been based on pile driving restrictions from November through April and our need to construct and operate a commercial-scale, offshore wind facility to help fulfill the Commonwealth of Virginia's renewable energy goals. These goals include the development of 5.2 gigawatts (GW) of clean, reliable offshore wind by 2034. The recently proposed Vessel Speed Reduction Rule extends proposed vessel speed restrictions through May of each year in an area extending from New England to waters adjacent to the Virginia and North Carolina border. In their comments on the draft CVOW LOA application, the Southern Environmental Law Center urged NMFS to extend the piling driving restriction for CVOW through May of each year consistent with the timing in the proposed Vessel Speed Restriction Rule. Dominion Energy disagrees with the request and urges NMFS not to further limit an already constrained activity schedule via restrictions on May pile driving which would yield no meaningful benefit for the North Atlantic right whale (NARW) in the CVOW Project Area but would adversely affect the Project.

Project planning, since inception of the Project, has been premised around November through April pile driving restrictions, and the ability to complete all pile driving activities necessary to construct the Project

within two pile driving seasons (2024 and 2025) to place the project in service by late 2026. This timing has been incorporated into Project scheduling and construction activity sequencing, vessel and other services procurement and availability, and contracts. This includes the coordination of specialized heavy lift and installation vessels to deliver and install the major offshore wind components. The Project's LOA application acoustic modeling and incidental take estimation, proposed installation approaches and proposed mitigation measures were also based on the timing associated with a November through April pile driving restriction. For example, the Project did not pursue options of installation of 3 piles per day or simultaneous pile driving because those methods were not needed to complete all pile driving activities within two May through October pile driving seasons.

The MMPA requires that effects, in this case acoustic effect, are mitigated to the level of least practicable adverse impact. That is, applicants must employ mitigation measures when effective measures are available. In the Project Area NARW densities are very low in May, particularly compared to both the higher density months in the Project Area and to New England densities. As such, risk can be mitigated through the measures clearly described in our LOA application and the additional mitigation measures provided in the Protected Species Mitigation and Monitoring Plan (PSMMP) submitted today. For the reasons detailed in this letter, the extension of the pile driving restriction through May is not necessary or practicable to protect the NARW.

NARW presence in the Project Area

Tetra Tech completed an evaluation of NARW presence (Attachment 1). The evaluation looked at the available density data for NARWs in the CVOW Project Area and regionally within the Mid-Atlantic. For comparison, density data were also extracted for the New England area. Additional sighting data from biogeographic information data (OBIS) and the right whale sighting advisory system (whalemap.org) have been included to further document and assess the potential NARW occurrence in the CVOW Lease Area and New England.

The density information in Attachment 1 indicates that the Project Area is at the tail end of low occurrence of NARW with the bulk of occurrences anticipated in New England in May. Specifically, as shown in Table 1 below, the predicted NARW density in the Project Area is orders of magnitude lower than the predicted May density in New England. Predicted May density within the Project Area is also approximately an order of magnitude lower than the peak predicted densities in the Project Area in late winter and early spring. Additionally, long-term detection and siting data demonstrates very low observations of NARW in the project area in May. These data, in addition to the seasonal density data from the Project Area and New England, present strong evidence based on the best available scientific information that NARWs are unlikely to be present in the Project Area during the month of May, with most individuals having completed their migration north to the New England area.

Table 1. NARW Predicted Density Data for May in New England and in the CVOW Project Area

Species	Region	Month	Maximum Predicted Abundance ¹ (Individual/100 km ²)	Average Predicted Abundance ¹ (Individual/100 km ²)
North Atlantic Right Whale	New England	May	3.82613	0.17633
North Atlantic Right Whale	CVOW Commercial Project area	May	0.01924	0.01472

¹Source: Roberts and Halpin 2022

Enhanced Mitigation Measures

In order to address any concerns regarding pile driving activities in May, Dominion Energy is proposing additional mitigation measures beyond those already proposed in the LOA application during the month of May despite the low likelihood of occurrence. Dominion Energy is proposing these additional measures to enhance confidence in detection which will further minimize the risks of Project activities exposing NARWs to disturbing noise levels. These additional mitigation measures are detailed in the PSMMP. Expanded mitigation measures proposed for May pile driving include:

- 24-hour passive acoustic monitoring (PAM) for NARW (using PAM methodology and detection parameters as described in the PSMMP)
- Use of drones incorporating infrared (IR) technology to enhance visual monitoring protocols (new drones implement infrared technology to not only detect animals under the surface but also their wakes)

Project Considerations for a November through May Pile Driving Restriction

Dominion Energy has evaluated the implications of an extension of the pile driving restriction into May. We have identified 3 potential cases to complete the Project if pile driving could not occur in May. All would significantly and adversely affect the Project's schedule and ability to meet the Project's stated purpose and need.

In the first case, we would compress the pile installation schedule with one pile installation vessel (the Orion) to allow installation of all piles within the proposed two pile driving seasons. This case would require re-sequencing of Project activities and would not allow for material weather delays (e.g., active tropical storm season) or equipment downtime. This case also assumes that the LOA would not limit the number of days of 2-pile per day installation if the Project remains within all take limitations provided in the LOA. Our current schedule includes an appropriate margin to account for weather delays and

equipment downtime that are inevitable when operating in the offshore maritime environment. Removal of this margin intentionally built into the construction schedule introduces significant and unacceptable Project schedule risks. Any significant weather delays or unscheduled equipment downtime would likely push the Project into a third pile driving season with associated schedule, cost and implementation impacts.

In the second case, we assume the procurement of a second pile installation vessel to accelerate pile installation during the second pile installation season. The introduction of a second pile installation vessel would allow the Project to maximize the number of 2-pile per day installation days by reducing time for transit and set-up. However, the submitted LOA application did not model or request take associated with simultaneous pile installation. These two vessels, therefore, would conduct activities in sequence and not simultaneously. The introduction of simultaneous pile driving or introduction of 3-piles installed per day is not possible at this time given the additional time that would be required to include those activities in our LOA application. Any further delay in the LOA would likely push the initiation of work later in 2026 and push the Project into requiring a third pile driving season with associated schedule, cost and implementation impacts. This case also assumes that an additional vessel could be procured and retrofitted to meet the project requirements. [REDACTED] This estimate includes the cost of a second pile driving vessel as well as ancillary support vessels to allow for pile driving in two areas of the Project lease. These ancillary support vessels include additional barges, double bubble curtain, safety and marine observers. It is important to note that an additional pile driving vessel would need to be retrofitted to meet the specific design parameters of the Project for pile driving.

In the third case, we evaluate the impacts of needing a third pile driving season (2026) to install all Project foundations. While the LOA application included the contingency of installing piles in 2026, the Project schedule is based on two pile driving seasons in 2024 and 2025. Dominion Energy has the Orion contracted for two pile driving seasons, and there is a significant risk that the Orion or another installation vessel could not be retained for a third due to the unprecedented worldwide demand on specialized heavy lift installation vessels. Additionally, this would require significant re-sequencing of construction activities and result in significant schedule impacts, undue costs, and reputational harm. [REDACTED]

[REDACTED] Similar to the second case, extending pile driving into a third year would require additional contractual cost to hold the Orion on the Project or to procure another installation vessel to complete the job. These same costs would also apply to all ancillary support vessels as well as support labor that would not be required in 2026, in the current scope of work.

Summary

Based on the density and sighting data within the Project Area, and the planned monitoring and mitigation efforts in May, the risk of pile driving disturbance to NARW is already very low during May. As a result, the planned monitoring and mitigation measures would be sufficiently protective of NARW. However, to augment the protections in the LOA application, Dominion Energy is proposing additional measures during

May that go above and beyond what is necessary. Additionally, as detailed above, restricting pile driving in May would have significant Project impacts that make the restriction impracticable for the Project. For these reasons, a pile driving restriction in May is not warranted, practicable, or appropriate for the Project.

If you have any questions or concerns regarding the enclosed submittal, please do not hesitate to contact Mitchell Jabs at Mitchell.M.Jabs@dominionenergy.com or (804) 297-8154.

Sincerely,



Jason P. Ericson
Director, Environmental

Enclosures

Attachment 1: CVOWC_NARW_Memo_December2022_final.pdf

Cc: Mitchell Jabs, Dominion Energy
Scott Lawton, Dominion Energy
GT Hollett, Dominion Energy
Peter Sturke, Dominion Energy
Kelsey Potlock, NMFS
Jaclyn Daly, NMFS
Carter Esch, NMFS
David McDuffee, BOEM
Bonnie Houghton, BOEM
Janelle Lavalley, Tetra Tech
Katie Guttenplan, Tetra Tech

To: Jason Ericson, Dominion Energy

Cc: Mitchell Jabs; Jerry Barnes; Peter Sturke (Dominion Energy) and Nathalie Schils, Kim Lanterman, Alex Cross (Tetra Tech)

From: Katie Guttenplan, Tetra Tech

Date: November 22, 2022

Subject: Pile Driving Restriction Evaluation

Tetra Tech completed an evaluation of available density data for North Atlantic right whales (NARWs) in the Coastal Virginia Offshore Wind (CVOW) Commercial Project Area and regionally within the Mid-Atlantic. For comparison, Tetra Tech also extracted density data for the New England area. Additional sighting data from biogeographic information data (OBIS) and the right whale sighting advisory system (whalemap.org) have been included to further document and assess the potential NARW occurrence in the CVOW Lease Area and New England.

NARW Seasonal Presence off Coastal Virginia and New England:

Off the Virginia coast, NARWs are known to occur in all seasons with passive acoustic detections increasing in fall and late winter/early spring (Salisbury et al., 2016, 2018). Using a spatial density model, Garrison et al. (2022) captured the southern distribution of NARWs during November-April, and the northern distribution from May-October. Annual peaks in sightings in coastal Virginia occur in April and annual lows occur from July to October according to biogeographic information data (OBIS 2020).

Within the New England area, NARWs are typically found in feeding grounds between February and May, with peak abundance in late March (Hayes et al. 2022). Observations in December 2008 noted congregations of more than 40 individual NARWs in the Jordan Basin area of the Gulf of Maine, leading researchers to believe this may be a wintering ground (Cole et al. 2013). In light of recent changes to seasonal habitat use, right whale populations have been documented migrating from the Southeast U.S. calving grounds to foraging grounds off of Cape Cod where they remain until late spring, moving north to utilize the Gulf of St. Lawrence in the spring, summer, and fall (Hayes et al. 2022). Studies suggest right whales have increased their utilization of the Gulf of St. Lawrence as a foraging refuge as prey availability continues to decrease in the Gulf of Maine (Meyer-Gutbrod et al. 2021).

CVOW NARW Predictive Density Data:

The Roberts and Halpin 2022 models are considered the best available density data for marine mammals. These models integrate habitat-based environmental covariates and systematic survey data collected through 2020 to generate predictive density maps. Table 1 indicates the highest density each month (maximum predicted density for individuals per 100 km²) and the predicted mean density each month (average predicted density for individuals per 100 km²) in the CVOW Commercial Project Area. The maximum predicted density for NARW densities within the Project Area is highest in the winter (December-February) and spring (March-April) with values ranging from 0.087-0.171 and 0.094-0.172, respectively. Lowest values occurred in late spring (May) and summer (June-August) with a maximum predicted density of 0.019 in May and a range of 0.0032-0.006 in the summer. When comparing the maximum predicted density values in Table 1, values are most similar during December and April (0.087 and 0.094) and from May-November (range 0.003-0.094).

The average predicted density for NARWs within the CVOW Commercial Project Area follows a similar trend. In the winter and early spring (January-March), densities are predicted to be the highest with a range 0.100-0.130. Lowest values occurred in late spring (May) and summer (June-August) with an average predicted density of 0.014 in May and a range of 0.002-0.005 in the summer. When comparing the average predicted density values in Table 1, values are most similar during the months of December and April (0.045 and 0.072) and from May-November (range 0.014-0.017).

Table 1. CVOW Monthly North Atlantic Right Whale Predicted Density

Species	Month	Season	Maximum Predicted Abundance (individual/100 km ²)	Average Predicted Abundance (individual/100 km ²)
North Atlantic Right Whale	January	Winter	0.17145	0.10037
	February	Winter	0.15628	0.13064
	March	Spring	0.17249	0.11995
	April	Spring	0.09402	0.07288
	May	Spring	0.01924	0.01472
	June	Summer	0.00658	0.00507
	July	Summer	0.00328	0.00258
	August	Summer	0.00354	0.00282
	September	Fall	0.00514	0.00385
	October	Fall	0.00918	0.00655
	November	Fall	0.03063	0.01781
	December	Winter	0.08779	0.04590

Source: Roberts and Halpin 2022

New England NARW Predictive Density Data:

Table 2 indicates the highest density each month (maximum predicted density for individuals per 100 km²), and the predicted mean density each month (average predicted density for individuals per 100 km²) in the New England area. Based on recent density data, the maximum predicted abundance for NARW densities in the New England area are highest in the spring (March-May) and summer (June-August) (Table 2). Densities ranged from 2.819-5.390 in the spring with a peak of 5.390 in April, and 2.590-4.283 in the summer with a peak of 4.283 in June. Maximum predicted densities decrease in the fall (September-November) ranging from 0.715-1.806, and in the winter (December-February), ranging from 1.656-2.690. When comparing the April and May density values, the maximum predicted density decreases from 5.39 to 3.82 (Table 2). The average predicted density follows a similar trend with highest predicted densities ranging from 0.096-0.176 in the spring and 0.024-0.120 in the summer. Lowest densities ranged from 0.010-0.058 in the fall and 0.057-0.111 in the winter. When comparing the April and May density values in Table 2, the average predicted density increases from 0.140 (April) to 0.176 (May).

Table 2. New England Monthly North Atlantic Right Whale Predicted Density

Species	Month	Season	Maximum Predicted Abundance (Individual/100 km ²)	Average Predicted Abundance (Individual/100 km ²)
North Atlantic Right Whale	January	Winter	2.57328	0.11101
	February	Winter	2.69001	0.08649
	March	Spring	2.81936	0.09617
	April	Spring	5.39058	0.14058
	May	Spring	3.82613	0.17633
	June	Summer	4.28336	0.12021
	July	Summer	2.59096	0.10677
	August	Summer	4.04541	0.02428
	September	Fall	0.97664	0.01053
	October	Fall	0.71505	0.01927
	November	Fall	1.80617	0.05801
	December	Winter	1.65650	0.05782

Source: Roberts and Halpin 2022

Tetra Tech generated a right whale density map to compare the densities in New England with those in the CVOW Lease Area (Figure 1). As demonstrated by the figure, highest densities are exhibited throughout the New England area compared to the Mid-Atlantic, with significant numbers southeast of Cape Cod.

For the purpose of this evaluation, we have also provided right whale visual detections during the month of May from years 2010-2022 along the Atlantic East coast (generated from WhaleMap.org) (Figure 2), as well as a table displaying NARW detections in the CVOW Commercial Project Area during the month of May from 1978-2016 extracted from available OBIS data (Table 3). These data represent the overall occurrence of NARWs both in the CVOW Commercial Project Area and in New England during the month of May spanning several years. NARW occurrence during the month of May resulted in a maximum predicted abundance of 3.826 individuals/100 km² in New England and 0.019 individuals/km² in the CVOW Commercial Project Area, differing by a magnitude of 2 (Table 3). Similarly, the average predicted abundance in New England in May is 0.176, and the average predicted abundance in the CVOW Commercial Project Area in May is 0.015, differing by a magnitude of 1 (Table 3).

Table 3. NARW Predicted Density Data for May in New England and in the CVOW Commercial Project Area

Species	Region	Month	Maximum Predicted Abundance ¹ (Individual/100 km ²)	Average Predicted Abundance ¹ (Individual/100 km ²)
North Atlantic Right Whale	New England	May	3.82613	0.17633
North Atlantic Right Whale	CVOW Commercial Project area	May	0.01924	0.01472

Source: Roberts and Halpin 2022

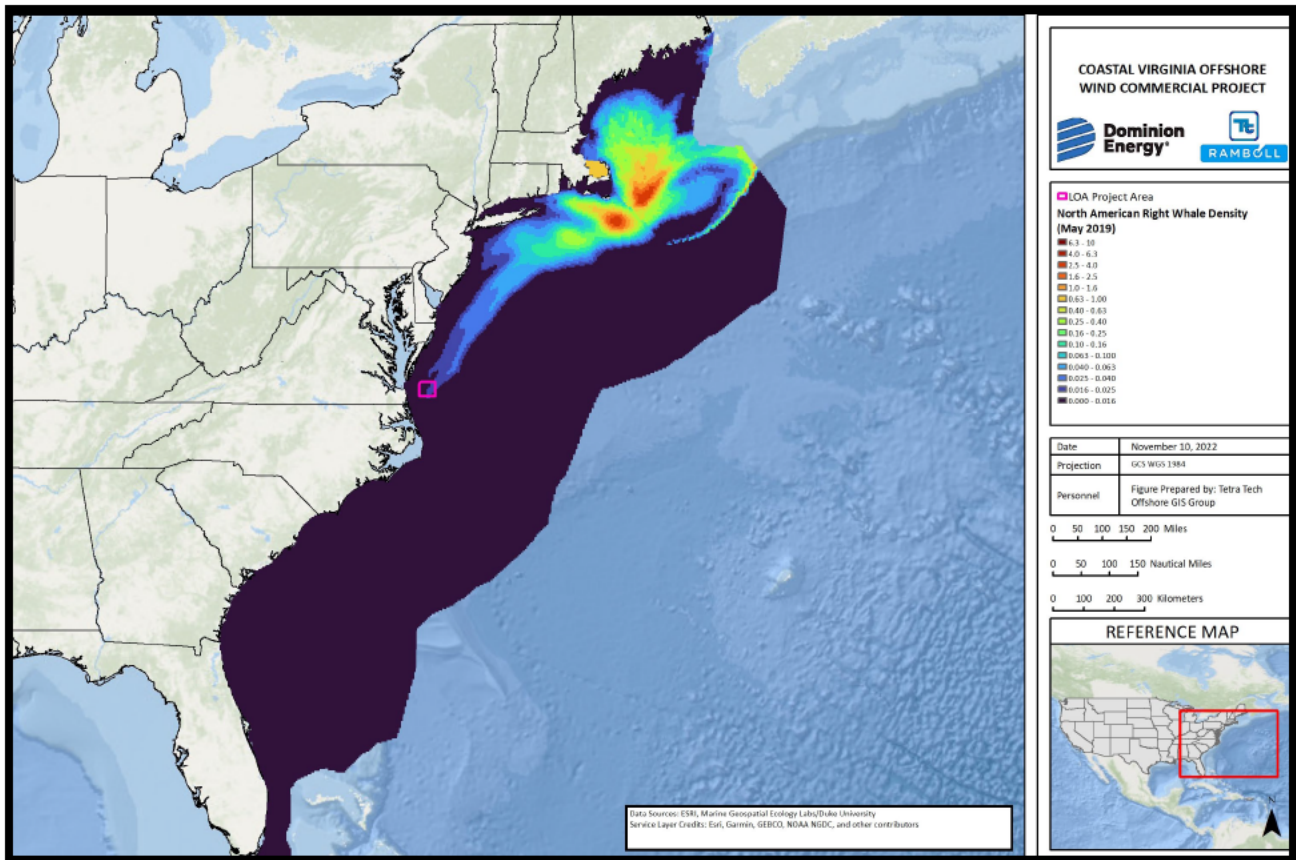


Figure 1. North Atlantic Right Whale Densities for the Month of May along the Atlantic East Coast (Roberts and Halpin 2022)



Figure 2. North Atlantic Right Whale Detections during the Month of May for 2010-2022 along the Atlantic East Coast extending into the Gulf of St. Lawrence (generated from WhaleMap.org)

Table 4. OBIS NARWSightings for May in the CVOWCommercial Project Area

Longitude	Scientific Name	Common Name	Count	Observation Date	Provider
-75.129121	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	1	1/20/2015	Virginia Aquarium & Marine Science Center
-75.490748	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	1	1/20/2015	Virginia Aquarium & Marine Science Center
-75.26524	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	1	4/4/2014	Virginia Aquarium & Marine Science Center
-75.567802	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	1	2/2/2016	Virginia Aquarium & Marine Science Foundation and University of North Carolina Wilmington
-75.583	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	2	11/14/1979	University of Rhode Island
-75.583	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	2	11/14/1978	University of Rhode Island

Source: OBIS (Ocean Biodiversity Information System) 2022

As shown in Figure 1, the CVOW Lease Area is at the tail end of low occurrence of right whales with the bulk of occurrence anticipated in New England in May. Figure 2 shows a similar trend from 2010-2022 during the month of May in which the right whale sighting advisory system detected 4,869 right whale individuals extending from the New York Bight into the Gulf of St. Lawrence, with zero detections off the coast of Virginia. Table 4 further confirms this trend, showing only eight NARW detections in the CVOW Commercial Project Area during the month of May during a 40-year time span from 1978-2016. These data, in addition to the seasonal density data from the CVOW Lease Area and New England, present strong evidence that NARWs are unlikely to be present in the CVOW Lease Area during the month of May, with most individuals having completed their migration north to the New England area.

Additional Mitigation Measures

Even though likelihood of occurrence is anticipated to be low during May, Dominion Energy can implement expanded mitigation and monitoring protocols to enhance confidence in detection and further reduce risks to NARWs. Expanded mitigation measures could include:

- 24-hour passive acoustic monitoring (PAM) (using PAM methodology and detection parameters as described in the Protected Species Mitigation and Monitoring Plan)
- Use of drones incorporating infrared (IR) technology (new drones implement infrared technology to not only detect animals under the surface but also their wakes) to enhance visual monitoring protocols
- Additional protected species observer (PSO) vessel coverage
- Aerial surveys

Based on internal discussion, enhanced monitoring in May would likely incorporate using 24-hour PAM and IR-capable drones to enhance both acoustic and visual detection. These measures would increase the likelihood of detection of NARWs, including mothers and calves, and would allow the Project to delay or shutdown pile driving activities to ensure that NARWs are not exposed to disturbing noise levels.

Summary:

Based on the density and sighting data within the CVOW Commercial Project Area, and the planned monitoring and mitigation efforts in May, the risk of pile driving disturbance to NARWs is deemed low during the month of May. As a result, the planned monitoring and mitigation measures would be sufficiently protective of NARWs. For these reasons, restricting pile driving in May is not warranted and would not be appropriate for the CVOW Commercial Project.

References:

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