



Draft Construction and Operations Plan Addendum for the Phase 2 Offshore Export Cable Corridor South Coast Variant

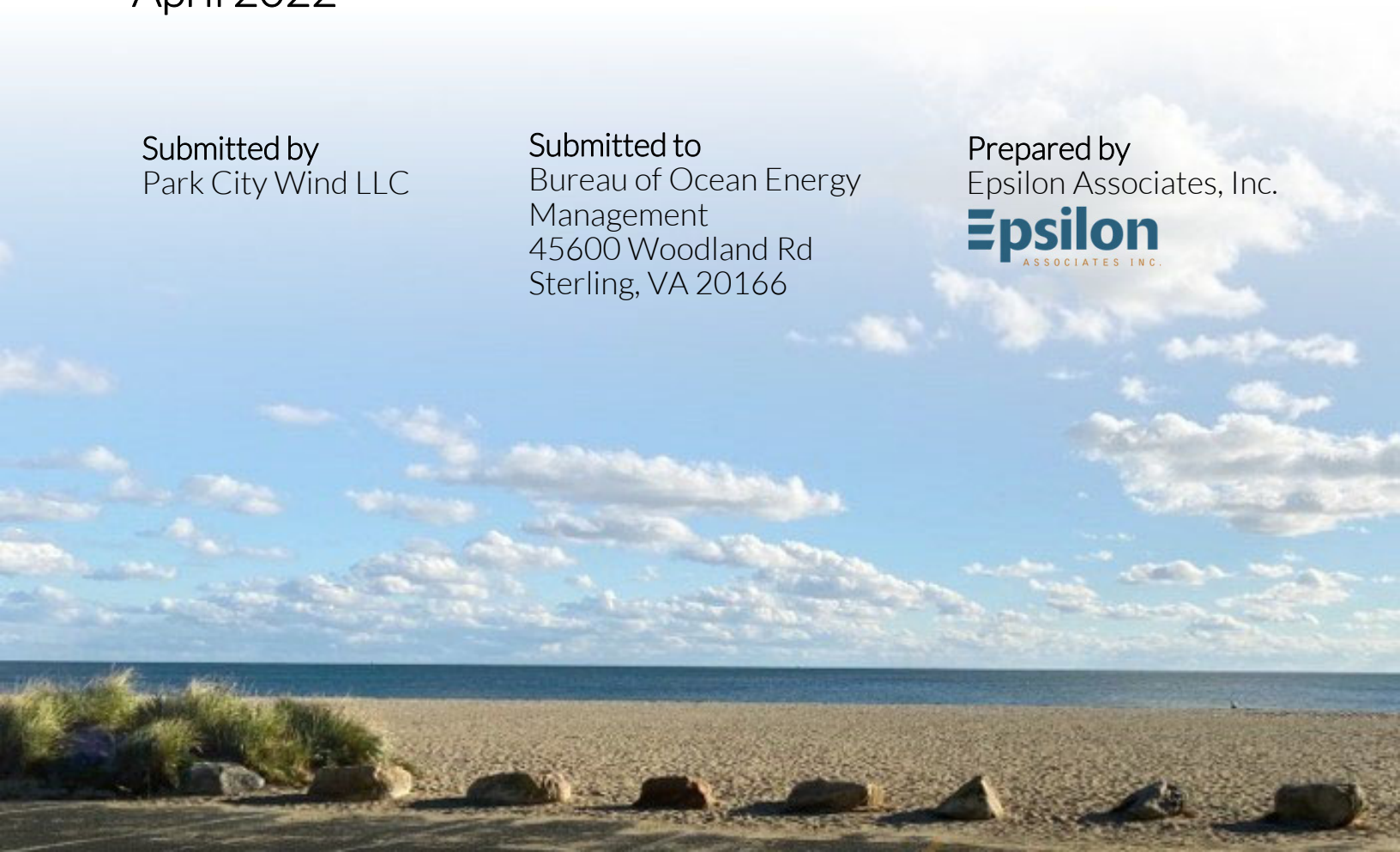
Appendices

April 2022

Submitted by
Park City Wind LLC

Submitted to
Bureau of Ocean Energy
Management
45600 Woodland Rd
Sterling, VA 20166

Prepared by
Epsilon Associates, Inc.





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In Association with:

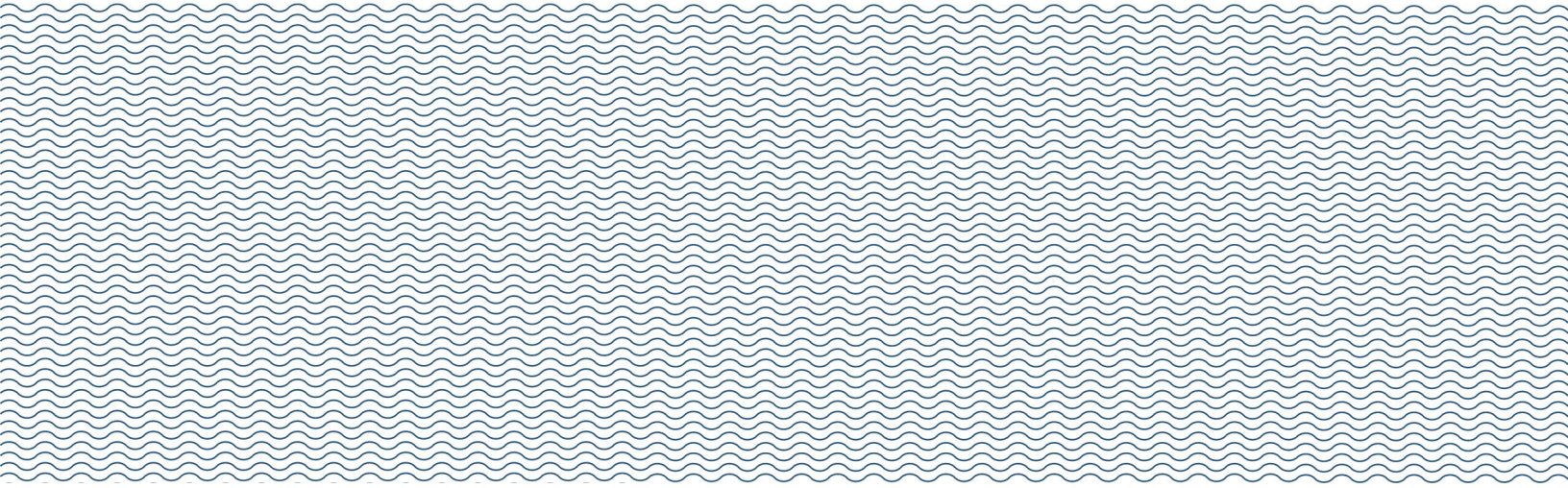
Baird & Associates
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Gray & Pape

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RPS
Saratoga Associates
SEARCH, Inc.
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Appendix G

Navigation and Vessel Crossing Analysis



New England Wind Phase 2 OECC South Coast Variant

Vessel Crossing Analysis

1. Introduction

New England Wind is the proposal to develop offshore renewable wind energy facilities in Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0534 along with associated offshore and onshore cabling, onshore substations, and onshore operations and maintenance (O&M) facilities. New England Wind will be developed in two Phases: Phase 1 (also known as Park City Wind) and Phase 2 (also known as Commonwealth Wind). Four or five offshore export cables (two for Phase 1 and two or three for Phase 2) will transmit electricity generated by the wind turbine generators (WTGs) to onshore transmission systems (see Figure 1). Park City Wind LLC, a wholly owned subsidiary of Avangrid Renewables, LLC, is the Proponent and will be responsible for the construction, operation, and decommissioning of New England Wind.

The Proponent has identified an Offshore Export Cable Corridor (OECC) for the installation of the offshore export cables (see Figure 1). The OECC travels north from Lease Area OCS-A 0534 along the eastern side of Muskeget Channel towards landfall sites in the Town of Barnstable, Massachusetts. The expected grid interconnection point for both Phases of New England Wind is the West Barnstable Substation. While the Proponent intends to install all Phase 2 offshore export cables within this OECC, the Proponent has identified two variations of the OECC that may be employed for Phase 2: the Western Muskeget Variant (which passes along the western side of Muskeget Channel) and the South Coast Variant (which connects to a potential second grid interconnection point) (see Figure 1). These variations are necessary to provide the Proponent with commercial flexibility should technical, logistical, grid interconnection, or other unforeseen issues arise during the Construction and Operations Plan (COP) review and engineering processes.

The Proponent has submitted a draft New England Wind COP that describes the OECC and both potential Phase 2 OECC variants, with accompanying data and analysis for the OECC and the Western Muskeget Variant. The purpose of this COP Addendum and associated appendices, including this South Coast Variant vessel crossing analysis, is to provide relevant data and analysis supporting the South Coast Variant in federal waters for New England Wind. This South Coast Variant vessel crossing analysis incorporates by reference the analyses in the Appendix III-I Navigation Safety Risk Assessment (Appendix III-I) of COP Volume III and is focused on describing vessel traffic information that is unique to the South Coast Variant.

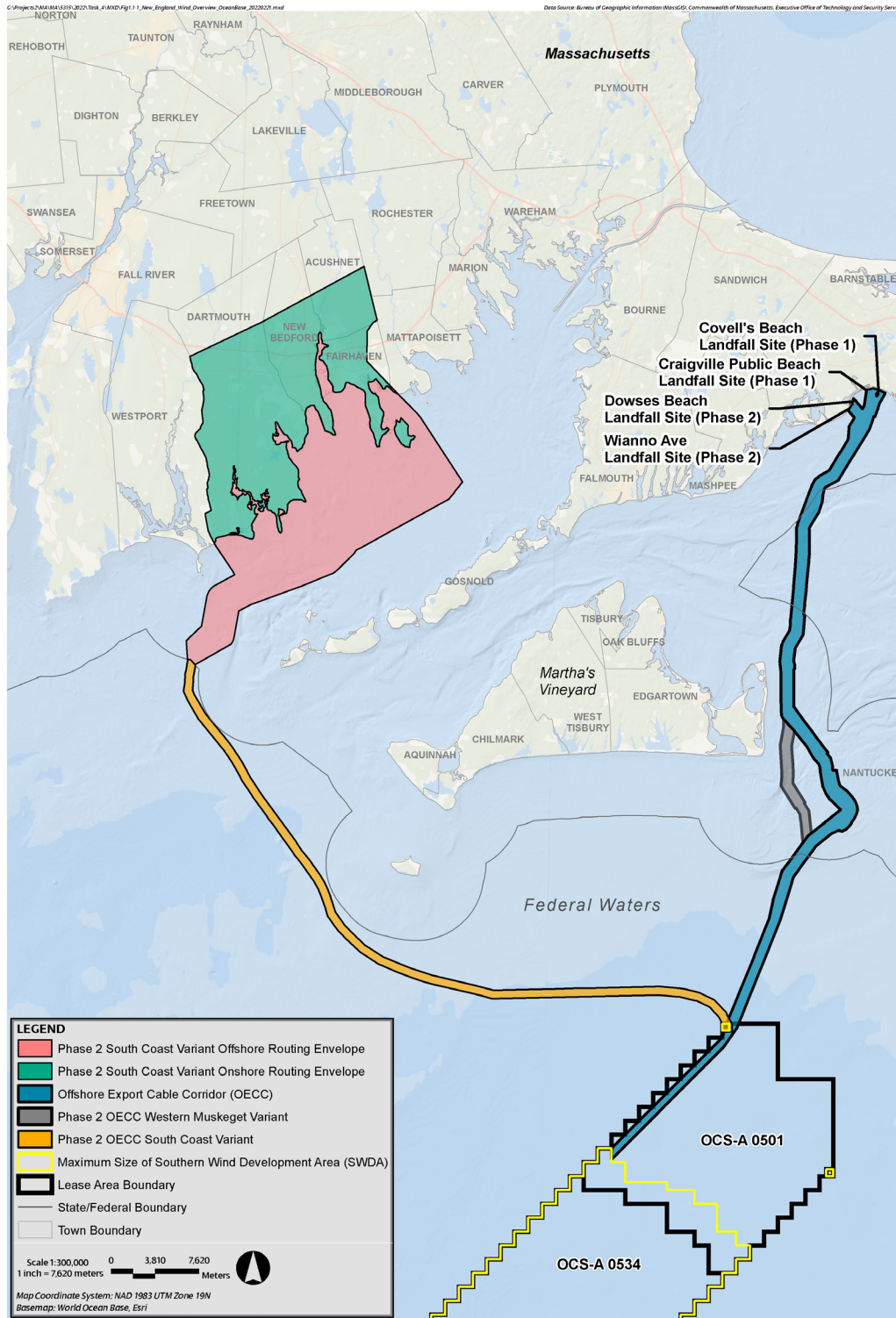


Figure 1: New England Wind Overview

1.1 Overview of the Phase 2 OECC South Coast Variant

As shown in Figure 1, the South Coast Variant diverges from the OECC at the northern boundary of Lease Area OCS-A 0501 and travels west-northwest to the state waters boundary near Buzzards Bay. From the Southern Wind Development Area (SWDA)¹ boundary (excluding the two separate aliquots that are closer to shore) through federal waters to the state waters boundary, the South Coast Variant is approximately 79 km (42 NM) in length and approximately 720 m (2,360 ft) in width. At the state waters boundary, the South Coast Variant broadens to a “Phase 2 South Coast Variant Offshore Routing Envelope” that indicates a region within Buzzards Bay where the Phase 2 offshore export cable(s) may be installed before making landfall along the southwest coast of Massachusetts within the Offshore Routing Envelope. If it becomes necessary to employ the South Coast Variant and a second grid interconnection point is secured, the Proponent understands that BOEM would conduct a supplemental review of those portions of the South Coast Variant not otherwise considered in the final environmental impact statement.

The South Coast Variant is included in the COP to provide the Proponent with the commercial flexibility required should technical, logistical, grid interconnection, or other unforeseen issues arise during the COP review and engineering processes that preclude one or more Phase 2 export cables from interconnecting at the West Barnstable Substation. If the South Coast Variant is used for Phase 2, there will be either: (1) one export cable installed in the South Coast Variant and two export cables installed in the OECC, (2) two export cables installed in the South Coast Variant and one export cable installed in the OECC, or (3) three export cables installed in the South Coast Variant.

¹ New England Wind will occupy all of Lease Area OCS-A 0534 and potentially a portion of Lease Area OCS-A 0501 in the event that Vineyard Wind 1 does not develop “spare” or extra positions included in Lease Area OCS-A 0501 and Vineyard Wind 1 assigns those positions to Lease Area OCS-A 0534. For the purposes of the COP, the SWDA is defined as all of Lease Area OCS-A 0534 and the southwest portion of Lease Area OCS-A 0501, as shown in Figure 1 of the COP Addendum.

2. Vessel Traffic in the Phase 2 OECC South Coast Variant

An AIS data analysis was carried out for the South Coast Variant in federal waters to evaluate the location and frequency of vessel crossings. The data sets and methods utilized to investigate the South Coast Variant vessel traffic are described in Appendix III-I of COP Volume III. The limitations, errors, and uncertainties reported in Appendix III-I should be considered in the assessment of the South Coast Variant vessel traffic data presented in this appendix.

Figure 2 shows the tracks of the vessel crossings distinguished by speed of the vessel, while Figure 3 gives a vessel traffic density map for the South Coast Variant. Overall, vessel traffic density along the South Coast Variant is relatively low, with the highest concentration of traffic as one approaches the continental mainland. Table 1 summarizes the vessels that have crossed the South Coast Variant by year and type for the 2016 to 2019 period. Most of the vessels were either fishing, recreational, or tug-towing.

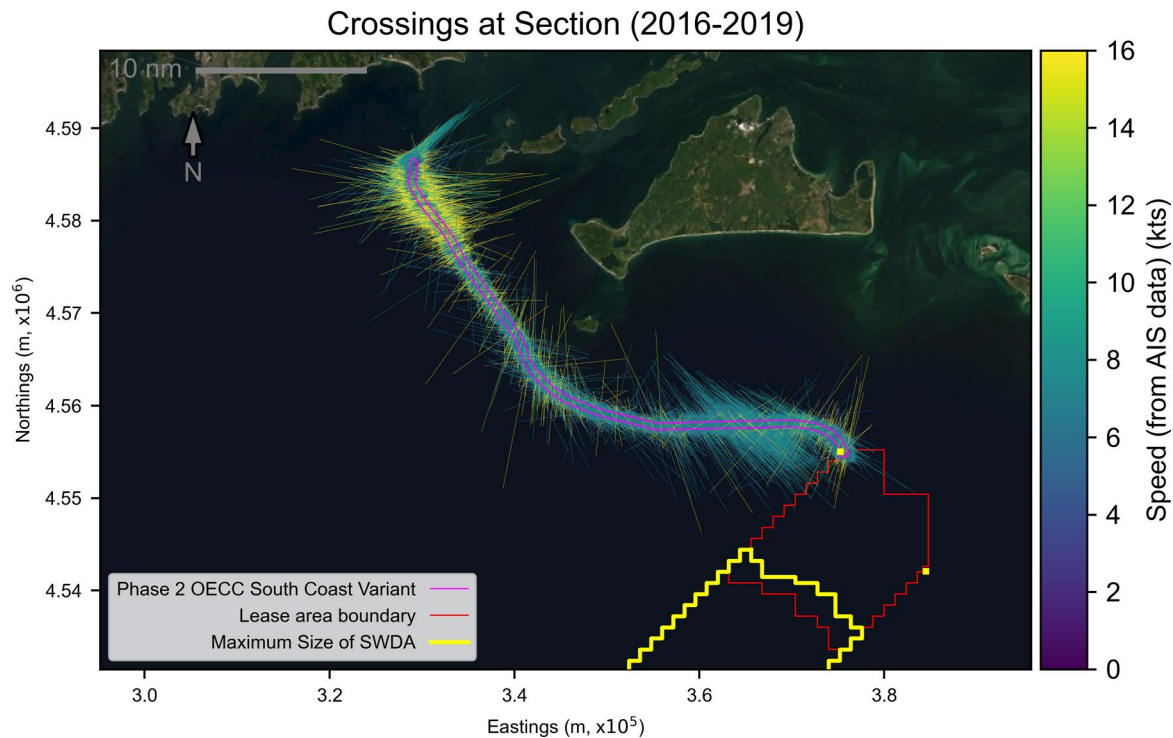


Figure 2: Vessel Tracks for Vessels Crossing the South Coast Variant

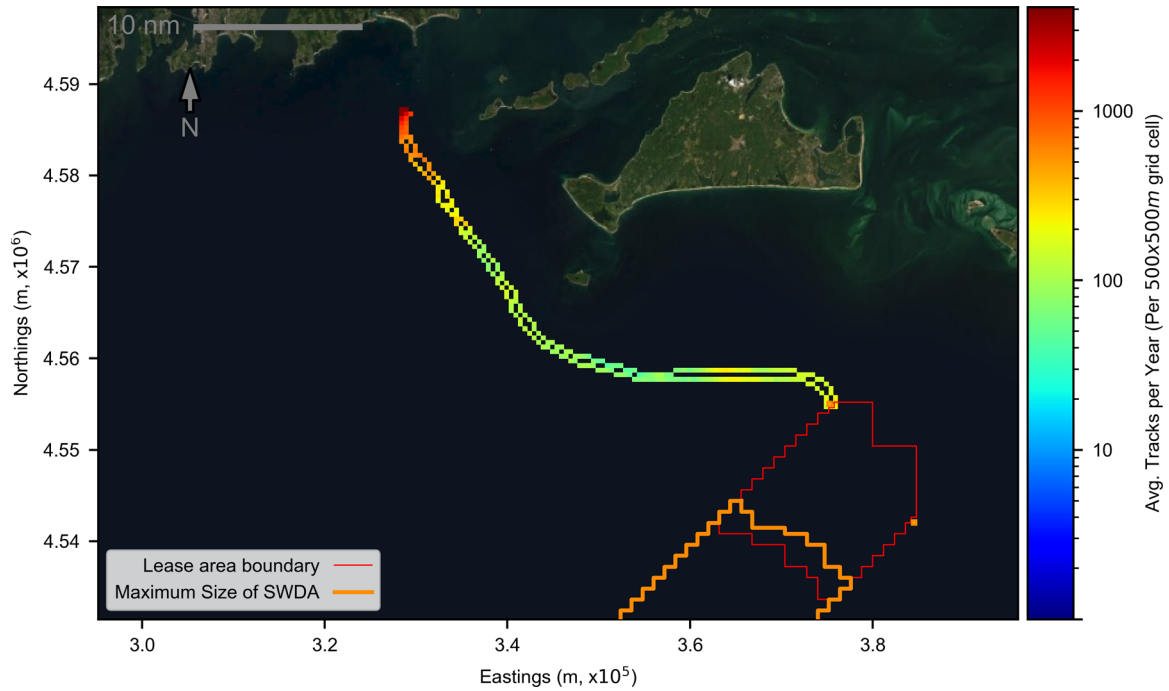


Figure 3: Vessel Traffic Density Map for Vessels Crossing the South Coast Variant

Table 1: South Coast Variant Vessel Crossings by Type and Year

Vessel Type	2016	2017	2018	2019
Cargo	145	53	78	45
Fishing	12,072	12,179	13,516	15,972
Ignore	276	272	135	155
Other	1,746	1,866	3,064	2,666
Passenger	608	810	579	387
Recreational	3,726	4,261	5,121	5,798
Tanker	24	24	43	31
Tug	4,661	4,532	3,869	3,023
Total	23,257	23,996	26,406	28,075
Avg. Crossings per day	64	66	72	77