



New England Wind



Construction and Operations Plan

Lease Area OCS-A 0534

Volume III Appendices

June 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:

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| Biodiversity Research Institute | Public Archaeology Laboratory, Inc. |
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June 2022

**Appendix III-T – New England Wind Maximum
Potential Seafloor Disturbance Tables**

New England Wind

Maximum Potential Seafloor Disturbance Tables

Prepared for:

Park City Wind LLC

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Epsilon Associates, Inc.

June 2022

APPENDIX III-T NEW ENGLAND WIND MAXIMUM POTENTIAL SEAFLOOR DISTURBANCE TABLES

Tables 1 through 3 present the maximum area of potential seafloor disturbance during construction within the Southern Wind Development Area (SWDA) for both Phases, Phase 1 individually, and Phase 2 individually. Tables 4 through 6 present the maximum area of potential seafloor disturbance during construction within the Offshore Export Cable Corridor (OECC) that travels along the eastern side of Muskeget Channel for both Phases, Phase 1 individually, and Phase 2 individually. Tables 7 and 8 compare the maximum area of potential seafloor disturbance within the OECC (from the SWDA boundary to the landfall site[s]) for both Phases and Phase 2 individually under the following scenarios:

1. Three Phase 2 offshore export cables are installed in the OECC that travels along the eastern side of Muskeget Channel (see Figure 4.1-8a of COP Volume I);
2. Two Phase 2 offshore export cables are installed in the OECC that travels along the eastern side of Muskeget Channel and one Phase 2 cable uses the Western Muskeget Variant (see Figure 4.1-8b of COP Volume I); and
3. One Phase 2 offshore export cable is installed in the OECC that travels along the eastern side of Muskeget Channel and two Phase 2 cables use the Western Muskeget Variant (See Figure 4.1-8e of COP Volume I).

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Table 1 New England Wind (Phases 1 and 2) Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA

| SOUTHERN WIND DEVELOPMENT AREA - BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION | | | | | | | |
|--|---|--|---|---|---------------------------------------|-----------------------|--------------|
| Foundations and Scour Protection | Max Number of Foundations¹ | Max Area of Scour Protection per Foundation² (m²) | | Total Area of Scour Protection | | | |
| | | | | m² | km² | acres | |
| Phase 1 Wind Turbine Generator (WTG) Foundations and Scour Protection | 41 | 4,624 | | 231,200 | 0.23 | 57 | |
| Phase 1 Electrical Service Platform (ESP) Foundations and Scour Protection | 2 (co-located) | 4,072 | | 8,144 | 0.01 | 2 | |
| Phase 2 WTG Foundations and Scour Protection | 85 | 9,754 | | 741,304 | 0.74 | 183 | |
| Phase 2 ESP Foundations and Scour Protection | 3 | 21,316 | | 63,948 | 0.06 | 16 | |
| Cable Protection³ | Max Length of Cable (m) | Percentage Requiring Cable Protection | Length of Cable Protected (m) | Width of Cable Protection (m) | Total Area of Cable Protection | | |
| | | | | | m² | km² | acres |
| Inter-link Cable ⁴ | 80,000 | 2% | 1,600 | 9 | 14,400 | 0.01 | 4 |
| Inter-array Cables | 475,000 | 2% | 9,500 | 9 | 85,500 | 0.09 | 21 |
| Offshore Export Cables (within SWDA) | 146,000 | 2% | 2,920 | 9 | 26,280 | 0.03 | 6 |
| | | | | | Total Scour + Cable Protection | | |
| | | | | | m² | km² | acres |
| TOTAL BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION IN THE SWDA | | | | | 1,170,776 | 1.17 | 289 |
| SOUTHERN WIND DEVELOPMENT AREA - BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS | | | | | | | |
| Jack-up and/or Anchored Vessels | Max Area Impacted by Each Jack-up or Anchored Vessel (m²) | Max No. of Jack-ups/Anchor Sets | Max No. of WTGs/ESPs⁵ | Total Area of Vessel Disturbance | | | |
| | | | | m² | km² | acres | |
| WTG Foundation Installation ⁶ | 1200 | 3 per WTG | 127 | 457,200 | 0.46 | 113 | |
| WTG Installation ⁶ | 1200 | 4 per WTG | 127 | 609,600 | 0.61 | 151 | |
| ESP Topside and Foundation Installation ⁶ | 1200 | 8 | 5 | 48,000 | 0.05 | 12 | |
| Inter-link Cable Installation ⁷ | 280 | 200 | N/A | 56,000 | 0.06 | 14 | |
| Offshore Export Cable Installation (within SWDA) ⁷ | 280 | 365 | N/A | 102,200 | 0.10 | 25 | |

Table 1 New England Wind (Phases 1 and 2) Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA (Continued)

| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS (CONTINUED) | | | | | | |
|--|--|-------------------------|-----------------------------------|---|-----------------------|--------------|
| Cable Installation | Max Length of Cable⁸ (m) | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | |
| | | | | m² | km² | acres |
| Inter-link Cable | 80,000 | 1 | 3 | 320,000 | 0.32 | 79 |
| Inter-array Cables | 475,000 | 1 | 3 | 1,900,000 | 1.9 | 469 |
| Offshore Export Cables (within SWDA) | 146,000 | 1 | 3 | 584,000 | 0.58 | 144 |
| Metocean Buoys | Max Area Impacted by Each Buoy Anchor (m²) | No. of Buoys | | Total Area of Buoy Disturbance | | |
| | | | | m² | km² | acres |
| Metocean Buoy Anchors | 4 | 100 | | 400 | 0.00 | 0 |
| | | | | Total Vessel + Cable Installation + Buoys | | |
| | | | | m² | km² | acres |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS IN THE SWDA | | | | 4,077,400 | 4.08 | 1,008 |
| TOTAL SEAFLOOR DISTURBANCE IN THE SWDA⁹ | | | | 5,192,096 | 5.19 | 1,283 |

Notes:

- Phase 1 will include a minimum of 41 WTGs and one ESP. Phase 2 will include a maximum of 88 WTG/ESP positions; up to three of those positions may be occupied by ESPs, which have a larger maximum scour protection area than the WTGs. The total area of scour protection was calculated using the following assumptions: for Phase 1, it was assumed that there would be 50 WTGs and two co-located ESPs (51 total positions). For Phase 2, it was assumed there would be 76 WTGs and three ESPs (79 total WTG/ESP positions). This sum provides a maximum of total impacts for both Phases that also covers the scenario where more than 79 Phase 2 WTG/ESP positions are installed (i.e., even if up to the maximum of 88 foundations are installed [of which, 3 may be ESPs]. The maximum area of potential seafloor disturbance included in Table 1 will not be exceeded.)
- The area of scour protection includes the physical footprint of the foundation.
- The majority of the cable entry protection system and any cable protection placed over it would lie on top of the scour protection and is therefore largely included in the area of scour protection. The estimate of inter-array cable protection includes any length of the cable entry protection system beyond the scour protection.
- The inter-link cables may not be used.
- Since seafloor impacts from anchoring and jacking-up during ESP installation are greater than the impacts from WTG and WTG foundation installation, the maximum seafloor impacts from jacking-up and anchoring were calculated based on the maximum number of ESPs that could be installed (i.e. 5 ESPs). Assuming two co-located ESPs for Phase 1 and three ESPs for Phase 2 (two of which are co-located), there would be up to 127 positions remaining for WTGs.
- Vessels may be jack-up, anchored, or dynamic positioning vessels. It is estimated that each jack-up vessel would impact approximately 1,200 m² (0.30 acres) of seafloor whereas each anchored vessel will only disturb approximately 784 m² (0.19 acres), excluding anchor sweep (which cannot be quantified at this early stage in the construction planning process). Thus, the maximum seafloor disturbance is calculated assuming all vessels jack-up.
- Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
- Maximum total Phase 1 and Phase 2 cable lengths.
- To avoid double-counting impacts, the total seafloor disturbance in the SWDA does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 2 Phase 1 Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA

| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION | | | | | | | |
|--|--|---------------------------------------|--|--|----------------------------------|-----------------|-----------|
| Foundations and Scour Protection | Max Number of Foundations | | Max Area of Scour Protection per Foundation ¹ (m ²) | | Total Area of Scour Protection | | |
| | | | | | m ² | km ² | acres |
| WTG Foundations and Scour Protection | 62 | | 4,624 | | 286,688 | 0.29 | 71 |
| ESP Foundations and Scour Protection | 2 | | 6,023 | | 12,046 | 0.01 | 3 |
| Cable Protection ² | Max Length of Cable (m) | Percentage Requiring Cable Protection | Length of Cable Protected (m) | Width of Cable Protection (m) | Total Area of Cable Protection | | |
| | | | | | m ² | km ² | acres |
| Inter-link Cable ³ | 20,000 | 2% | 400 | 9 | 3,600 | 0.00 | 1 |
| Inter-array Cables | 225,000 | 2% | 4,500 | 9 | 40,500 | 0.04 | 10 |
| Offshore Export Cables (within SWDA) | 36,000 | 2% | 720 | 9 | 6,480 | 0.01 | 2 |
| | | | | | Total Scour + Cable Protection | | |
| | | | | | m ² | km ² | acres |
| TOTAL BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION IN THE SWDA | | | | | 349,314 | 0.35 | 86 |
| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS | | | | | | | |
| Jack-up and/or Anchored Vessels | Max Area Impacted by Each Jack-up or Anchored Vessel (m ²) | | Max No. of Jack-ups/Anchor Sets | Max No. of WTGs/ESPs | Total Area of Vessel Disturbance | | |
| | | | | | m ² | km ² | acres |
| WTG Foundation Installation ⁴ | 1,200 | | 3 per WTG | 62 | 223,200 | 0.22 | 55 |
| WTG Installation ⁴ | 1,200 | | 4 per WTG | 62 | 297,600 | 0.30 | 74 |
| ESP Topside and Foundation Installation ⁴ | 1,200 | | 8 per ESP | 2 | 19,200 | 0.02 | 5 |
| Inter-link Cable Installation ⁵ | 280 | | 50 | N/A | 14,000 | 0.01 | 3 |
| Offshore Export Cable Installation (within SWDA) ⁵ | 280 | | 90 | N/A | 25,200 | 0.03 | 6 |
| Cable Installation | Max Length of Cable ⁶ (m) | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Inter-link Cable | 20,000 | 1 | 3 | 80,000 | 0.08 | 20 | |
| Inter-array Cables | 225,000 | 1 | 3 | 900,000 | 0.90 | 222 | |
| Offshore Export Cables (within SWDA) | 36,000 | 1 | 3 | 144,000 | 0.14 | 36 | |

Table 2 Phase 1 Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA (Continued)

| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS (CONTINUED) | | | | | |
|--|--|---------------------|--|-----------------------|--------------|
| Metocean Buoys | Max Area Impacted by Each Buoy Anchor (m²) | No. of Buoys | Total Area of Buoy Disturbance | | |
| | | | m² | km² | acres |
| Metocean Buoy Anchors | 4 | 50 | 200 | 0.00 | 0 |
| | | | Total Vessel + Cable Installation + Buoys | | |
| | | | m² | km² | acres |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS IN THE SWDA | | | 1,703,400 | 1.70 | 421 |
| TOTAL SEAFLOOR DISTURBANCE IN THE SWDA⁷ | | | 2,030,234 | 2.03 | 502 |

Notes:

1. The area of scour protection includes the physical footprint of the foundation.
2. The majority of the cable entry protection system and any cable protection placed over it would lie on top of the scour protection and is therefore largely included in the area of scour protection. The estimate of inter-array cable protection includes any length of the cable entry protection system beyond the scour protection.
3. The inter-link cable may not be used.
4. Vessels may be jack-up, anchored, or dynamic positioning vessels. It is estimated that each jack-up vessel would impact approximately 1,200 m² (0.30 acres) of seafloor whereas each anchored vessel will only disturb approximately 784 m² (0.19 acres), excluding anchor sweep (which cannot be quantified at this early stage in the construction planning process). Thus, the maximum seafloor disturbance is calculated assuming all vessels jack-up.
5. Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
6. Maximum total Phase 1 cable lengths.
7. To avoid double-counting impacts, the total seafloor disturbance in the SWDA does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 3 Phase 2 Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA

| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION | | | | | | | |
|--|--|---------------------------------------|--|-----------------------------------|--|-----------------|------------|
| Foundations and Scour Protection | Max Number of Foundations ¹ | | Max Area of Scour Protection per Foundation ² (m ²) | | Total Area of Scour Protection | | |
| | | | | | m ² | km ² | acres |
| WTG Foundations and Scour Protection | 85 | | 9,754 | | 741,304 | 0.74 | 183 |
| ESP Foundations and Scour Protection | 3 | | 21,316 | | 63,948 | 0.06 | 16 |
| Cable Protection ³ | Max Length of Cable (m) | Percentage Requiring Cable Protection | Length of Cable Protected (m) | Width of Cable Protection (m) | Total Area of Cable Protection | | |
| | | | | | m ² | km ² | acres |
| Inter-link Cable ⁴ | 60,000 | 2% | 1,200 | 9 | 10,800 | 0.01 | 3 |
| Inter-array Cables | 325,000 | 2% | 6,500 | 9 | 58,500 | 0.06 | 14 |
| Offshore Export Cables (within SWDA) | 110,000 | 2% | 2,200 | 9 | 19,800 | 0.02 | 5 |
| | | | | | Total Scour + Cable Protection | | |
| | | | | | m ² | km ² | acres |
| TOTAL BOTTOM DISTURBANCE DUE TO STRUCTURES OR CABLE/SCOUR PROTECTION IN THE SWDA | | | | | 894,352 | 0.89 | 221 |
| SOUTHERN WIND DEVELOPMENT AREA – BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS | | | | | | | |
| Jack-up and/or Anchored Vessels | Max Area Impacted by Each Jack-up or Anchored Vessel (m ²) | | Max No. of Jack-ups/Anchor Sets | Max No. of WTGs/ESPs ⁵ | Total Area of Vessel Disturbance | | |
| | | | | | m ² | km ² | acres |
| WTG Foundation Installation ⁶ | 1,200 | | 3 per WTG | 77 | 277,200 | 0.28 | 68 |
| WTG Installation ⁶ | 1,200 | | 4 per WTG | 77 | 369,600 | 0.37 | 91 |
| ESP Topside and Foundation Installation ⁶ | 1,200 | | 8 per ESP | 3 | 28,800 | 0.03 | 7 |
| Inter-link Cable Installation ⁷ | 280 | | 150 | N/A | 42,000 | 0.04 | 10 |
| Offshore Export Cable Installation (within SWDA) ⁷ | 280 | | 275 | N/A | 77,000 | 0.08 | 19 |
| Cable Installation | Max Length of Cable ⁸ (m) | | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | |
| | | | | | m ² | km ² | acres |
| Inter-link Cable | 60,000 | | 1 | 3 | 240,000 | 0.24 | 59 |
| Inter-array Cables | 325,000 | | 1 | 3 | 1,300,000 | 1.3 | 321 |
| Offshore Export Cables (within SWDA) | 110,000 | | 1 | 3 | 440,000 | 0.44 | 109 |

Table 3 Phase 2 Maximum Area of Potential Seafloor Disturbance During Construction at the SWDA (Continued)

| SOUTHERN WIND DEVELOPMENT AREA - BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS (CONTINUED) | | | | | |
|--|--|---------------------|--|-----------------------|--------------|
| Metocean Buoys | Max Area Impacted by Each Buoy Anchor (m²) | No. of Buoys | Total Area of Buoy Disturbance | | |
| | | | m² | km² | acres |
| Metocean Buoy Anchors | 4 | 50 | 200 | 0.00 | 0 |
| | | | Total Vessel + Cable Installation + Buoys | | |
| | | | m² | km² | acres |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND BUOYS IN THE SWDA | | | 2,774,800 | 2.77 | 686 |
| TOTAL SEAFLOOR DISTURBANCE IN THE SWDA⁹ | | | 3,629,552 | 3.63 | 897 |

Notes:

1. Phase 2 will include a maximum of 88 WTG/ESP positions; up to three of those positions may be occupied by ESPs, which have a larger maximum scour protection area than the WTGs. The total area of scour protection was calculated based on the sum of (1) 76 WTG foundations with suction bucket bottom-frame foundations, which require the largest area of scour protection at 9,754 m² each and (2) 3 ESPs. This sum provides an upper limit that also covers the scenario where more than 76 WTGs are installed (i.e., even if up to the maximum of 88 foundations are installed [of which, 3 may be ESPs]. The maximum area of potential seafloor disturbance included in Table 3 will not be exceeded).
2. The area of scour protection includes the physical footprint of the foundation.
3. The majority of the cable entry protection system and any cable protection placed over it would lie on top of the scour protection and is therefore largely included in the area of scour protection. The estimate of inter-array cable protection includes any length of the cable entry protection system beyond the scour protection.
4. The inter-link cables may not be used.
5. Phase 2 may include two co-located ESPs. In this scenario, Phase 2 could include three ESPs at two WTG/ESP positions and 77 WTGs, resulting in 80 total foundations.
6. Vessels may be jack-up, anchored, or dynamic positioning vessels. It is estimated that each jack-up vessel would impact approximately 1,200 m² (0.30 acres) of seafloor whereas each anchored vessel will only disturb approximately 784 m² (0.19 acres), excluding anchor sweep (which cannot be quantified at this early stage in the construction planning process). Thus, the maximum seafloor disturbance is calculated assuming all vessels jack-up.
7. Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
8. Maximum total Phase 2 cable lengths.
9. To avoid double-counting impacts, the total seafloor disturbance in the SWDA does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 4 New England Wind (Phases 1 and 2) Maximum Area of Potential Seafloor Disturbance During Construction along the OECC

| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO CABLE PROTECTION | | | | | | | |
|---|---|--|-------------------------------------|---|--------------------------------|-----------------|------------|
| Cable Protection | Maximum Length of Cable (m) | Percentage Requiring Cable Protection ¹ | Length of Cable to be Protected (m) | Width of Cable Protection ² (m) | Total Area of Cable Protection | | |
| | | | | | m ² | km ² | acres |
| Offshore Export Cables (Outside SWDA) | 412,000 | ~6% | 24,340 | 9 | 219,060 | 0.22 | 54 |
| TOTAL BOTTOM DISTURBANCE DUE TO CABLE PROTECTION IN THE OECC | | | | | 219,060 | 0.22 | 54 |
| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING | | | | | | | |
| Jack-up Vessels | Area Impacted by Each Jack-up (m ²) | No. of Jack-ups per Splice | Max No. of Splices | Total Area of Jack-up Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Jack-up Vessels for Cable Splicing | 600 | 1 | 15 (3 per cable) | 9,000 | 0.01 | 2 | |
| Anchoring and Grounding of Cable-Laying Vessels | Area Impacted by Each Anchor Set/Vessel Grounding (m ²) | Distance Between Repositioning | No. of Anchor Sets/Groundings | Total Area of Anchoring Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Anchoring for Offshore Export Cable Installation (Outside SWDA) ³ | 280 | 400 | 1,030 | 288,400 | 0.29 | 71 | |
| Vessel Grounding for Offshore Export Cable Installation (Outside SWDA) ⁴ | 9,750 | 1 per cable | 5 (1 per cable) | 48,750 | 0.05 | 12 | |
| Cable Installation and Preparatory Work ⁵ | Max Length of Cable ⁶ (m) | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Offshore Export Cable Installation (Outside SWDA) | 412,000 | 1 | 3 | 1,648,000 | 1.65 | 407 | |
| Dredging | | | | Total Area of Dredging Disturbance ⁷ | | | |
| | | | | m ² | km ² | acres | |
| Dredging Prior to Cable Installation | | | | 481,683 | 0.48 | 119 | |
| | | | | Total Vessels + Cable Installation + Dredging | | | |
| | | | | m ² | km ² | acres | |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING IN THE OECC | | | | | 2,475,833 | 2.48 | 612 |
| TOTAL SEAFLOOR DISTURBANCE IN THE OECC⁸ | | | | | 2,597,533 | 2.60 | 642 |

**Table 4 New England Wind (Phases 1 and 2) Maximum Area of Potential Seafloor Disturbance During Construction along the OECC
(Continued)**

Notes:

1. The percent of the offshore export cable requiring cable protection is based on the OECC route length rather than the length of cable with micro-siting.
2. The cable protection used in limited areas to cover offshore export cable joints or cable crossings may be wider, but the total cable protection area will remain the same.
3. Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
4. Based on the footprint of a 150 x 50 m (492 x 164 ft) vessel, with extra contingency to account for multiple groundings at the same location.
5. Some pre-pass jetting may occur along limited sections of the offshore export cable route; however, impacts will occur within the same geographical space as cable installation.
6. Maximum total Phase 1 and Phase 2 cable lengths.
7. To avoid double-counting impacts, the total area of dredging disturbance does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width counted above. The total dredging area including the cable installation trench is approximately 0.62 km² (153 acres).
8. To avoid double-counting impacts, the total seafloor disturbance in the OECC does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 5 Phase 1 Maximum Area of Potential Seafloor Disturbance During Construction along the OECC

| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO CABLE PROTECTION | | | | | | | |
|---|---|--|-------------------------------------|---|--------------------------------|-----------------|------------|
| Cable Protection | Maximum Length of Cable (m) | Percentage Requiring Cable Protection ¹ | Length of Cable to be Protected (m) | Width of Cable Protection ² (m) | Total Area of Cable Protection | | |
| | | | | | m ² | km ² | acres |
| Offshore Export Cables (Outside SWDA) | 166,000 | ~6% | 10,060 | 9 | 90,540 | 0.09 | 22 |
| TOTAL BOTTOM DISTURBANCE DUE TO CABLE PROTECTION IN THE OECC | | | | | 90,540 | 0.09 | 22 |
| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING | | | | | | | |
| Jack-up Vessels | Area Impacted by Each Jack-up (m ²) | No. of Jack-ups per Splice | Max No. of Splices | Total Area of Jack-up Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Jack-up Vessels for Cable Splicing | 600 | 1 | 6 (3 per cable) | 3,600 | 0.00 | 1 | |
| Anchoring and Grounding of Cable-Laying Vessels | Area Impacted by Each Anchor Set/Vessel Grounding (m ²) | Distance Between Repositioning | No. of Anchor Sets/Groundings | Total Area of Anchoring Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Anchoring for Offshore Export Cable Installation (Outside SWDA) ³ | 280 | 400 | 415 | 116,200 | 0.12 | 29 | |
| Vessel Grounding for Offshore Export Cable Installation (Outside SWDA) ⁴ | 9,750 | 1 per cable | 2 | 19,500 | 0.02 | 5 | |
| Cable Installation and Preparatory Work ⁵ | Max Length of Cable ⁶ (m) | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Offshore Export Cable Installation (Outside SWDA) | 166,000 | 1 | 3 | 664,000 | 0.66 | 164 | |
| Dredging | | | | Total Area of Dredging Disturbance ⁷ | | | |
| | | | | m ² | km ² | acres | |
| Dredging Prior to Cable Installation | | | | 211,064 | 0.21 | 52 | |
| | | | | Total Vessels + Cable Installation + Dredging | | | |
| | | | | m ² | km ² | acres | |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING IN THE OECC | | | | | 1,014,364 | 1.01 | 251 |
| TOTAL SEAFLOOR DISTURBANCE IN THE OECC⁸ | | | | | 1,064,664 | 1.06 | 263 |

Table 5 Phase 1 Maximum Area of Potential Seafloor Disturbance During Construction along the OECC (Continued)

Notes:

1. The percent of the offshore export cable requiring cable protection is based on the OECC route length (i.e. ~78 km per cable) rather than the length of cable with micro-siting (i.e. ~83 km).
2. The cable protection used in limited areas to cover offshore export cable joints or cable crossings may be wider, but the total cable protection area will remain the same.
3. Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
4. Based on the footprint of a 150 x 50 m (492 x 164 ft) vessel, with extra contingency to account for multiple groundings at the same location.
5. Some pre-pass jetting may occur along limited sections of the offshore export cable route; however, impacts will occur within the same geographical space as cable installation.
6. Maximum total Phase 1 cable lengths.
7. To avoid double-counting impacts, the total area of dredging disturbance does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width counted above. The total dredging area including the cable installation trench is approximately 0.27 km² (67 acres).
8. To avoid double-counting impacts, the total seafloor disturbance in the OECC does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 6 Phase 2 Maximum Area of Potential Seafloor Disturbance During Construction along the OECC

| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO CABLE PROTECTION | | | | | | | |
|---|---|--|-------------------------------------|---|--------------------------------|-----------------|------------|
| Cable Protection | Maximum Length of Cable (m) | Percentage Requiring Cable Protection ¹ | Length of Cable to be Protected (m) | Width of Cable Protection ² (m) | Total Area of Cable Protection | | |
| | | | | | m ² | km ² | acres |
| Offshore Export Cables (Outside SWDA) | 246,000 | ~6% | 14,280 | 9 | 128,520 | 0.13 | 32 |
| TOTAL BOTTOM DISTURBANCE DUE TO CABLE PROTECTION IN THE OECC | | | | | 128,520 | 0.13 | 32 |
| OFFSHORE EXPORT CABLE CORRIDOR - BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING | | | | | | | |
| Jack-up Vessels | Area Impacted by Each Jack-up (m ²) | No. of Jack-ups per Splice | Max No. of Splices | Total Area of Jack-up Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Jack-up Vessels for Cable Splicing | 600 | 1 | 9 (3 per cable) | 5,400 | 0.01 | 1 | |
| Anchoring and Grounding of Cable-Laying Vessels | Area Impacted by Each Anchor Set/Vessel Grounding (m ²) | Distance Between Repositioning | No. of Anchor Sets/Groundings | Total Area of Anchoring Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Anchoring for Offshore Export Cable Installation (Outside SWDA) ³ | 280 | 400 | 615 | 172,200 | 0.17 | 43 | |
| Vessel Grounding for Offshore Export Cable Installation (Outside SWDA) ⁴ | 9,750 | 1 per cable | 3 | 29,250 | 0.03 | 7 | |
| Cable Installation and Preparatory Work ⁵ | Max Length of Cable ⁶ (m) | Trench Width (m) | Total Skid/Track Width (m) | Total Area of Cable Installation Disturbance | | | |
| | | | | m ² | km ² | acres | |
| Offshore Export Cable Installation (Outside SWDA) | 246,000 | 1 | 3 | 984,000 | 0.98 | 243 | |
| Dredging | | | | Total Area of Dredging Disturbance ⁷ | | | |
| | | | | m ² | km ² | acres | |
| Dredging Prior to Cable Installation | | | | 270,619 | 0.27 | 67 | |
| | | | | Total Vessels + Cable Installation + Dredging | | | |
| | | | | m ² | km ² | acres | |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING IN THE OECC | | | | | 1,461,469 | 1.46 | 361 |
| TOTAL SEAFLOOR DISTURBANCE IN THE OECC⁸ | | | | | 1,532,869 | 1.53 | 379 |

Table 6 Phase 2 Maximum Area of Potential Seafloor Disturbance During Construction along the OECC (Continued)

Notes:

1. The percent of the offshore export cable requiring cable protection is based on the OECC route length (i.e. ~77 km per cable) rather than the length of cable with micro-siting (i.e. ~82 km).
2. The cable protection used in limited areas to cover offshore export cable joints or cable crossings may be wider, but the total cable protection area will remain the same.
3. Conservatively assumes a nine-anchor spread where each anchor impacts 30 m² (323 ft²) and two spud legs that impact 10 m² (108 ft²). The anchoring footprint excludes anchor sweep, which cannot be quantified at this early stage in the construction planning process.
4. Based on the footprint of a 150 x 50 m (492 x 164 ft) vessel, with extra contingency to account for multiple groundings at the same location.
5. Some pre-pass jetting may occur along limited sections of the offshore export cable route; however, impacts will occur within the same geographical space as cable installation.
6. Maximum total Phase 2 cable lengths.
7. To avoid double-counting impacts, the total area of dredging disturbance does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width counted above. The total dredging area including the cable installation trench is approximately 0.35 km² (86 acres).
8. To avoid double-counting impacts, the total seafloor disturbance in the OECC does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 7 Comparison of the Maximum Area of Potential Seafloor Disturbance During Construction within the OECC for Both Phases With and Without the Phase 2 OECC Western Muskeget Variant

| | 5 Cables in OECC Through Eastern Muskeget (Scenario 1 of Table 4.1-2) | 4 Cables in OECC Through Eastern Muskeget + 1 Cable in Phase 2 OECC Western Muskeget Variant (Scenario 2 of Table 4.1-2) | 3 Cables in OECC Through Eastern Muskeget + 2 Cables in Phase 2 OECC Western Muskeget Variant (Scenario 5 of Table 4.1-2) |
|--|--|---|--|
| Maximum Total Length of Phase 1 and Phase 2 Offshore Export Cables (Outside SWDA) ¹ | 412 km (222 NM) | 409 km (221 NM) | 406 km (219 NM) |
| BOTTOM DISTURBANCE DUE TO CABLE PROTECTION | | | |
| Percentage Requiring Cable Protection ² | ~6% | ~7% | ~7% |
| Total Area of Cable Protection in OECC | 0.22 km² (54 acres) | 0.23 km² (57 acres) | 0.24 km² (60 acres) |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING | | | |
| Area of Disturbance from Cable Installation, Preparatory Work, and Vessels ³ | 1.99 km ² (493 acres) | 1.98 km ² (489 acres) | 1.97 km ² (486 acres) |
| Area of Dredging Prior to Cable Installation ⁴ | 0.48 km ² (119 acres) | 0.51 km ² (125 acres) | 0.51 km ² (125 acres) |
| Volume of Dredging | 314,800 m ³ (411,700 cubic yards) | 340,300 m ³ (445,100 cubic yards) | 344,900 m ³ (451,100 cubic yards) |
| Total Disturbance Due To Vessels, Cable Installation, And Dredging in OECC | 2.48 km² (612 acres) | 2.49 km² (614 acres) | 2.47 km² (611 acres) |
| TOTAL SEAFLOOR DISTURBANCE IN OECC⁵ | 2.60 km² (642 acres) | 2.61 km² (646 acres) | 2.61 km² (645 acres) |

Notes:

1. The total cable length for five Phase 1 and Phase 2 offshore export cables from the SWDA boundary to the landfall site(s).
2. The percent of the offshore export cables requiring cable protection is based on the OECC route length rather than the length of cable with micro-siting.
3. Includes potential impacts from a 1 m (3.3 ft) wide cable installation trench, a 3 m (10 ft) wide total skid/track width from the cable installation tool, vessel anchors that reposition every 400 m (1,312 ft) during offshore export cable installation, jack-up vessel legs during cable splicing (assumed three splices per cable), and vessel grounding (once per cable).
4. To avoid double-counting impacts, the total area of dredging disturbance does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width.
5. To avoid double-counting impacts, the total seafloor disturbance in the OECC does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.

Table 8 Comparison of the Maximum Area of Potential Seafloor Disturbance During Construction within the OECC for Phase 2 Only With and Without the Western Muskeget Variant

| | 3 Cables in OECC Through Eastern Muskeget (Scenario 1 of Table 4.1-2) | 2 Cables in OECC Through Eastern Muskeget + 1 Cable in Phase 2 OECC Western Muskeget Variant (Scenario 2 of Table 4.1-2) | 1 Cable in OECC Through Eastern Muskeget + 2 Cables in Phase 2 OECC Western Muskeget Variant (Scenario 5 of Table 4.1-2) |
|---|--|---|---|
| Maximum Total Length of Phase 2 Offshore Export Cables (Outside SWDA) ¹ | 246 km (133 NM) | 243 km (131 NM) | 240 km (130 NM) |
| BOTTOM DISTURBANCE DUE TO CABLE PROTECTION | | | |
| Percentage Requiring Cable Protection ² | ~6% | ~7% | ~8% |
| Total Area of Cable Protection in OECC | 0.13 km² (32 acres) | 0.14 km² (35 acres) | 0.15 km² (38 acres) |
| BOTTOM DISTURBANCE DUE TO VESSELS, CABLE INSTALLATION, AND DREDGING | | | |
| Area of Disturbance from Cable Installation, Preparatory Work, and Vessels ³ | 1.19 km ² (294 acres) | 1.18 km ² (291 acres) | 1.16 km ² (287 acres) |
| Area of Dredging Prior to Cable Installation ⁴ | 0.27 km ² (67 acres) | 0.29 km ² (73 acres) | 0.30 km ² (73 acres) |
| Volume of Dredging | 180,000 m ³ (235,400 cubic yards) | 205,500 m ³ (268,800 cubic yards) | 210,100 m ³ (274,800 cubic yards) |
| Total Disturbance Due To Vessels, Cable Installation, And Dredging in OECC | 1.46 km² (361 acres) | 1.47 km² (364 acres) | 1.46 km² (360 acres) |
| TOTAL SEAFLOOR DISTURBANCE IN OECC⁵ | 1.53 km² (379 acres) | 1.55 km² (383 acres) | 1.54 km² (381 acres) |

Notes:

1. The total cable length for all three Phase 2 offshore export cables from the SWDA boundary to the Phase 2 landfall site(s).
2. The percent of the offshore export cables requiring cable protection is based on the OECC route length (i.e. ~77 km per cable using the OECC through the eastern side of Muskeget Channel and ~74 km per cable using the Western Muskeget Variant) rather than the length of cable with micro-siting.
3. Includes potential impacts from a 1 m (3.3 ft) wide cable installation trench, a 3 m (10 ft) wide total skid/track width from the cable installation tool, vessel anchors that reposition every 400 m (1,312 ft) during offshore export cable installation, jack-up vessel legs during cable splicing (assumed three splices per cable), and vessel grounding (once per cable).
4. To avoid double-counting impacts, the total area of dredging disturbance does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width.
5. To avoid double-counting impacts, the total seafloor disturbance in the OECC does not include the 1 m (3.3 ft) wide cable installation trench and 3 m (10 ft) skid/track width for the length of cable covered by cable protection.