

distance from the KOP. See the Intervisibility

Assessment table on this sheet for more details.

SCENARIO 3 INTERVISIBILITY ASSESSMENT FROM KEY OBSERVATION POINT

Development	Minimum Distance from KOP to Turbines (mi)	Maximum Blade Height of Nearest Turbine (Feet)	Visibility Status This Scenario	
Maryland Offshore Wind Project, OCS-A 0490	12.4	938	Visible	
Skipjack, OCS-A 0519	16.1	853	Visible	
Garden State Offshore Wind, OCS-A 0482	15.7	853	Visible	
Ocean Wind 2, OCS-A 0532	42.1	906	Visible	
Ocean Wind 1, OCS-A 0498	53.5	906	Developed But Beyond Visible Distance	
Atlantic Shores South, OCS-A 0499	65.9	1049	Developed But Beyond Visible Distance	
Atlantic Shores North, OCS-A 0549	77.8	1049	Developed But Beyond Visible Distance	
Coastal Virginia Offshore Wind (C-Lease), OCS-A 0483	106.8	869	Developed But Beyond Visible Distance	
Coastal Virginia Offshore Wind (Research Lease), OCS-A 0497	115.6	607	Developed But Beyond Visible Distance	
Atlantic Shores Offshore Wind Bight (NY Bight), OCS-A 0541	88.8	853	Developed But Beyond Visible Distance	
Invenergy Wind Offshore (NY Bight), OCS-A 0542	89.8	853	Developed But Beyond Visible Distance	

Information on the neighboring offshore development projects is based on the most current information available.



 $^{\rm 1}$ "The Best Paper Format and Viewing Distance to Represent the Scope and Scale of Visual Impacts", Journal of Landscape Architecture, 4-2019, pp. 142-151, J. Palmer

The Maryland Offshore Wind Project will either use two large OSSs only at interior locations within the array or four small OSSs throughout the array. For the purpose of the simulations, the largest OSS that may be used at a particular location has been simulated.

OSS Not Visible

SITE INFORMATION

Site Name: Bethany Beach Boardwalk & Wreck Site

Location: Bethany Beach, DE

Date: 3/23/2023 Time: 9:30 AM

Coordinates (Lat/Lon WGS84): 38.536, -75.053

Landscape Zone: Barren Land (Rock/Sand/Clay) - Beach

CUMULATIVE VISUAL EFFECTS SCENARIOS (CURRENT IS BOLD)

Scenario 1, Pre-Buildout of Maryland Offshore Wind Project

Scenario 2, Maryland Offshore Wind Project and Projects Already or Considered Constructed

Scenario 3, Project Construction by 2030

Scenario 4, Project Construction by 2030 Without Maryland Offshore Wind Project

Scenario 5, Maryland Wind Without Other Foreseeable Future Changes

SCENARIO DESCRIPTION AND ASSUMPTIONS

In addition to the project conditions from Scenarios 1 and 2 for Coastal Virginia Offshore Wind (Research Lease) OCS-A 0497, Coastal Virginia Offshore Wind (C-Lease) OCS-A 0483, Ocean Wind 1 OCS-A 0498, Atlantic Shores South OCS-A 0499, and Maryland Offshore Wind Project OCS-A 0490, Scenario 3 depicts all projects scheduled for construction after the Maryland Offshore Wind Project through 2030 with the addition of Atlantic Shores North OCS-A 0549, Ocean Wind 2 OCS-A 0532, Garden State Offshore Wind OCS-A 0482, Skipjack OCS-A 0519, Atlantic Shores Offshore Wind Bight (NY Bight) OCS-A 0541, and Invenergy Wind Offshore (NY Bight) OCS-A 0542. The simulations produced for Scenario 3 visualize all such projects that are determined by the intervisibility assessment to be visible from KOP 16, Bethany Beach Boardwalk and Wreck Site.

All simulated WTGs use monopile foundation structures, and all are oriented in the same direction with the centermost WTG facing directly towards the camera. The simulated WTGs use RAL 9010 Pure White paint color and the same lighting scheme that was outlined in US Wind's Visual Impact Assessment. As a point of reference, a 1049' tall structure drops completely below the horizon at a distance of 47.8 statute miles from a 5.1' tall viewer at this KOP.

SHEET INDEX AND VIEWING INSTRUCTIONS

Sheet 1 – Simulation Context and Intervisibility Assessment

Sheet 2 – Project Development and Visibility Summary

Sheet 3 – Existing Conditions Panorama View (124°)

Sheet 4 – Panorama View (124°) with Simulations without Project Extents

Sheet 5 – Panorama View (124°) with Simulations and Project Extents

Sheet 6 – Single Frame (50-mm Lens) Simulation, Left View and Project Extents

Sheet 7 – Single Frame (50-mm Lens) Simulation, Right View and Project Extents

To approximate the field of view represented by a 16.5" panorama it should be printed on an 11" x 17" sheet of paper and viewed from 8 inches away¹. For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar matches what's instructed on the simulation sheet.

In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical.

KOP 16 BETHANY BEACH, DELAWARE

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations Scenario 3, Project Construction by 2030

SHEET 1 - SIMULATION CONTEXT AND INTERVISIBILITY ASSESSMENT

² Sheppard, S. 1989. Visual Simulation: A User's Guide for Architects, Engineers, and Planners. New York: Van Nostrand Rheinhold.

Closer to Maryland Offshore Wind Project

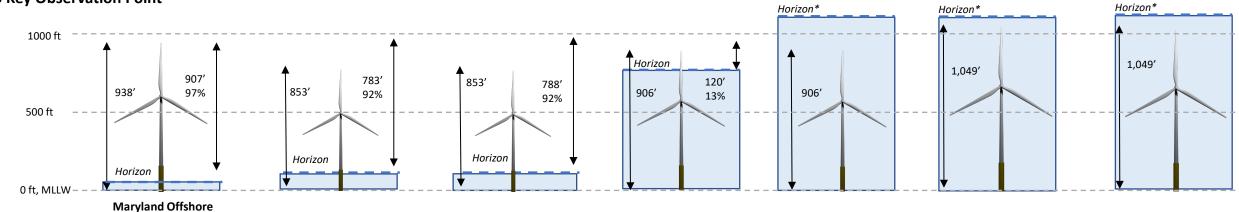
Skipjack

Wind Project

Scenario 3 Visibility of Nearest Turbine to Key Observation Point

Based on findings from the Intervisibility Assessment the following developments are excluded from this visibility matrix due to their distance from the key observation point:

- Coastal Virginia Offshore Wind (C-Lease) OCS-A 0483
- Coastal Virginia Offshore Wind (Research Lease) OCS-A 0497
- Atlantic Shores Offshore Wind Bight (NY Bight) OCS-A 0541
- Invenergy Wind Offshore (NY Bight) OCS-A 0542



Ocean Wind 2

Ocean Wind 1

	Visible	Visible	Visible	Visible	Developed But Beyond Visible Distance	Developed But Beyond Visible Distance	Developed But Beyond Visible Distance
# Turbines	121	33	80	111	108	201	147
# Turbines Visible	121	33	80	9	0	0	0
# Nacelle FAA Lights Visible	121	33	80	0	0	0	0
# Mid-Tower FAA Lights Visible	105	33	56	0	0	0	0
# Substations**	4	0	0	0	3	4	0
# Substations Visible	2	0	0	0	0	0	0
Minimum Distance from KOP to Turbines (mi)	12.4	16.1	15.7	42.1	53.5	65.9	77.8
Maximum Distance from KOP to Turbines (mi)	31.3	25.8	27.3	65.1	65.8	80.4	98.6
Nearest Turbine – Vertical Extent of Turbine Visible (ft)	907	783	788	120	N/A	N/A	N/A
Farthest Turbine – Vertical Extent of Turbine Visible (ft)	543	605	568	19	N/A	N/A	N/A
Nearest Turbine – Vertical Extent of Turbine Visible (%)	97%	92%	92%	13%	N/A	N/A	N/A
Farthest Turbine – Vertical Extent of Turbine Visible (%)	58%	71%	67%	2%	N/A	N/A	N/A
Mid-Tower FAA Light Height (ft)	271	253	253	263	263	304	304
Hub Height (ft)	528	492	492	512	512	590	590
Nacelle Top FAA Light Height (ft)	542	506	506	525	525	608	608
Blade Tip Height (ft)	938	853	853	906	906	1049	1049
Rotor Diameter (ft)	820	722	722	788	788	918.6	918.6

Garden State

Information on the neighboring offshore development projects is based on the most current information available.

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Atlantic Shores North

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations Scenario 3, Project Construction by 2030

SHEET 2 - PROJECT DEVELOPMENT AND VISIBILITY SUMMARY

Farther from Maryland Offshore Wind Project

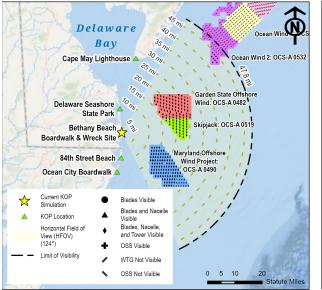
Atlantic Shores South

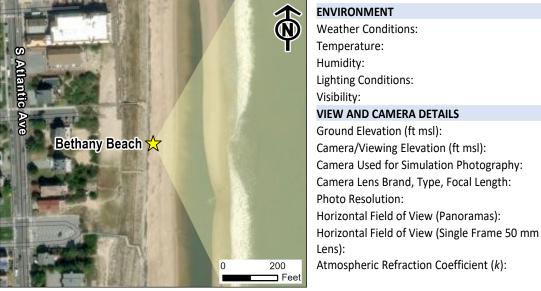


^{*}All turbines for this development are below the horizon.

^{**}The Maryland Offshore Wind Project will either use two large OSSs only at interior locations within the array or four small OSSs throughout the array. For the purpose of the simulations, the largest OSS that may be used at a particular location has been simulated.







Weather Conditions: Partly Sunny 54° F Temperature: **Humidity:** 79% **Lighting Conditions:** Sunny/Clear Visibility: 10 Miles **VIEW AND CAMERA DETAILS** Ground Elevation (ft msl): 11.5 Camera/Viewing Elevation (ft msl): 16.5 Camera Used for Simulation Photography: Nikon D850 Camera Lens Brand, Type, Focal Length: Nikon Fixed 50 mm 1200 DPI Photo Resolution: 124° Horizontal Field of View (Panoramas):

39.6°

0.143

ENVIRONMENT

VIEWING INSTRUCTIONS: To approximate the field of view represented by a 16.5" panorama simulation, it should be printed on an 11" x 17" sheet of paper and viewed from 8 inches away1. For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar is 1 inch long:

1" Measured On Screen – View from 20" Away

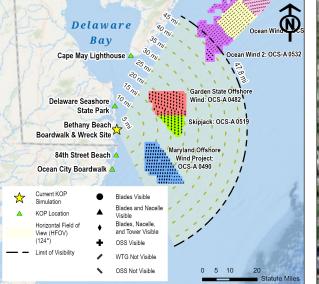
In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical. See Sheet 1 for citations.

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Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations Scenario 3, Project Construction by 2030

SHEET 3 - EXISTING CONDITIONS PANORAMA VIEW (124°)







ENVIRONMENT Weather Conditions: Partly Sunny 54° F Temperature: Humidity: 79% **Lighting Conditions:** Sunny/Clear Visibility: 10 Miles **VIEW AND CAMERA DETAILS** Ground Elevation (ft msl): 11.5 Camera/Viewing Elevation (ft msl): 16.5 Camera Used for Simulation Photography: Nikon D850 Camera Lens Brand, Type, Focal Length: Nikon Fixed 50 mm 1200 DPI Photo Resolution: 124° Horizontal Field of View (Panoramas): Horizontal Field of View (Single Frame 50 mm 39.6° 0.143 Atmospheric Refraction Coefficient (k):

VIEWING INSTRUCTIONS: To approximate the field of view represented by a 16.5" panorama simulation, it should be printed on an 11" x 17" sheet of paper and viewed from 8 inches away¹. For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar is 1 inch long:

1" Measured On Screen – View from 20" Away

In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical. See Sheet 1 for citations.

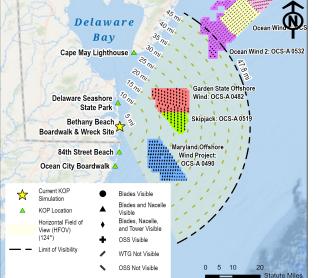
KOP 16 BETHANY BEACH, DELAWARE

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations Scenario 3, Project Construction by 2030

SHEET 4 - PANORAMA VIEW (124°) WITH SIMULATIONS WITHOUT PROJECT EXTENTS









Weather Conditions: Partly Sunny 54° F Temperature: 79% Humidity: **Lighting Conditions:** Sunny/Clear Visibility: 10 Miles **VIEW AND CAMERA DETAILS** 11.5 Ground Elevation (ft msl): Camera/Viewing Elevation (ft msl): 16.5 Camera Used for Simulation Photography: Nikon D850 Camera Lens Brand, Type, Focal Length: Nikon Fixed 50 mm 1200 DPI Photo Resolution: Horizontal Field of View (Panoramas): 124° Horizontal Field of View (Single Frame 50 mm 39.6° Lens): 0.143

Atmospheric Refraction Coefficient (k):

printed on an 11" x 17" sheet of paper and viewed from 8 inches away1. For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar is 1 inch long:

1" Measured On Screen – View from 20" Away

In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical. See Sheet 1 for citations.

KOP 16 BETHANY BEACH, DELAWARE

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations Scenario 3, Project Construction by 2030

SHEET 5 - PANORAMA VIEW (124°) WITH SIMULATIONS AND **PROJECT EXTENTS**



Ocean Wind 2 Garden State Offshore Wind 4444 M447 A4 A A A A A A Graphic shows which specific portion of the human field of view (124°) is VIEWING INSTRUCTIONS: To approximate the field of view represented by a 15.7" single frame simulation captured with a 50-mm lens it should be printed on an 11" x 17" sheet of paper and viewed from 22 inches away¹. For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar is 1 inch long: **KOP 16 BETHANY BEACH, DELAWARE** Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations
Scenario 3, Project Construction by 2030 "Measured On Screen – View from 20" Away SHEET 6 - SINGLE FRAME (50-mm LENS) SIMULATION, LEFT VIEW AND PROJECT EXTENTS In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical. See Sheet 1 for citations.



Maryland Offshore Wind Project





Graphic shows which specific portion of the human field of view (124°) is visible in this single frame (40°) photo.

VIEWING INSTRUCTIONS: To approximate the field of view represented by a 15.7" single frame simulation captured with a 50-mm lens it should be printed on an $11'' \times 17'''$ sheet of paper and viewed from 22 inches away! For the most realistic experience when viewing in a digital format, position your computer screen 20" away and adjust the PDF viewing software's zoom so that the calibration bar is 1 inch long:

1" Measured On Screen View from 20" Away

In all cases care must be taken to not over or underrepresent the visual contrasts². Typical binocular human field of view is assumed to be 124-degrees horizontal and 55-degrees vertical. See Sheet 1 for citations.

KOP 16 BETHANY BEACH, DELAWARE

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations
Scenario 3, Project Construction by 2030

SHEET 8 - SINGLE FRAME (50-mm LENS) SIMULATION, RIGHT VIEW AND PROJECT EXTENTS

