

SCENARIO 2 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	10.8	938	Visible
Skipjack, OCS-A 0519	21.4	853	Not Developed
Garden State Offshore Wind, OCS-A 0482	21.8	853	Not Developed
Ocean Wind 2, OCS-A 0532	48.5	906	Not Developed
Ocean Wind 1, OCS-A 0498	60	906	Developed But Beyond Visible Distance
Atlantic Shores South, OCS-A 0499	72.7	1049	Developed But Beyond Visible Distance
Atlantic Shores North, OCS-A 0549	85.2	1049	Not Developed
Coastal Virginia Offshore Wind (C-Lease), OCS-A 0483	97.6	869	Developed But Beyond Visible Distance
Coastal Virginia Offshore Wind (Research Lease), OCS-A 0497	106.6	607	Developed But Beyond Visible Distance
Atlantic Shores Offshore Wind Bight (NY Bight), OCS-A 0541	94.2	853	Not Developed
Invenergy Wind Offshore (NY Bight), OCS-A 0542	95.1	853	Not Developed

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



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

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

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.

SITE INFORMATION

Site Name:

84th Street Beach

Location:

Ocean City, MD

Date:

7/22/2021

Time:

6:22 AM (*1:00 PM)

Coordinates (Lat/Lon WGS84):

38.402, -75.059

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

Scenario 2 depicts the same project conditions as those represented in Scenario 1 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, and Atlantic Shores South OCS-A 0499, but with the addition of the proposed construction of the Maryland Offshore Wind Project OCS-A 0490. Simulations produced for this scenario include the Maryland Offshore Wind Project and those Scenario 1 developments determined by the intervisibility assessment to be visible from KOP 22, 84th Street Beach.

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 47.5 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
Sheet 8 – Supplemental Single Frame (40°) Left View (1:00 PM)*
Sheet 9 – Supplemental Single Frame (40°) Right View (1:00 PM)*

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 22 84TH STREET BEACH, MARYLAND

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations

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

SHEET 1 - SIMULATION CONTEXT AND INTERVISIBILITY ASSESSMENT





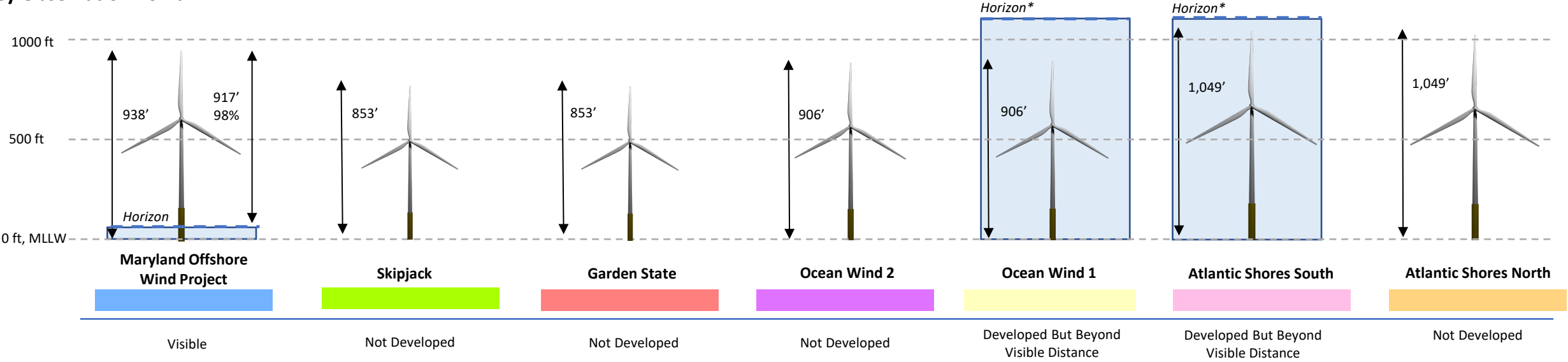
Project Extents Visible from this KOP in the Current Scenario

Scenario 2 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



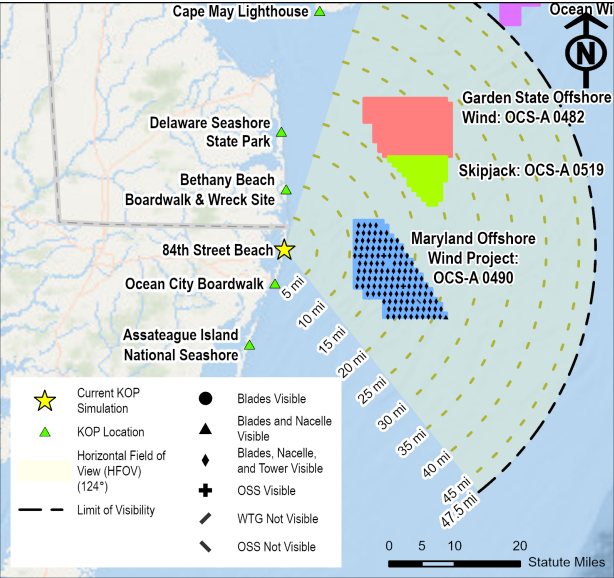
# Turbines	121				108	201	
# Turbines Visible	121				0	0	
# Nacelle FAA Lights Visible	121				0	0	
# Mid-Tower FAA Lights Visible	120				0	0	
# Substations**	4				3	4	
# Substations Visible	3				0	0	
Minimum Distance from KOP to Turbines (mi)	10.8				60.0	72.7	
Maximum Distance from KOP to Turbines (mi)	26.7				72.6	87.1	
Nearest Turbine – Vertical Extent of Turbine Visible (ft)	917				N/A	N/A	
Farthest Turbine – Vertical Extent of Turbine Visible (ft)	661				N/A	N/A	
Nearest Turbine – Vertical Extent of Turbine Visible (%)	98%				N/A	N/A	
Farthest Turbine – Vertical Extent of Turbine Visible (%)	70%				N/A	N/A	
Mid-Tower FAA Light Height (ft)	271				263	304	
Hub Height (ft)	528				512	590	
Nacelle Top FAA Light Height (ft)	542				525	608	
Blade Tip Height (ft)	938				906	1049	
Rotor Diameter (ft)	820				788	918.6	

*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.

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





ENVIRONMENT	
Weather Conditions:	Slight Haze
Temperature:	66° F
Humidity:	79%
Lighting Conditions:	Lit from SE
Visibility:	10 Miles
VIEW AND CAMERA DETAILS	
Ground Elevation (ft msl):	9.1
Camera/Viewing Elevation (ft msl):	5.1
Camera Used for Simulation Photography:	Nikon D850
Camera Lens Brand, Type, Focal Length:	Nikon Fixed 50 mm
Photo Resolution:	1200 DPI
Horizontal Field of View (Panoramas):	124°
Horizontal Field of View (Single Frame 50 mm Lens):	39.6°
Atmospheric Refraction Coefficient (k):	0.143

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:

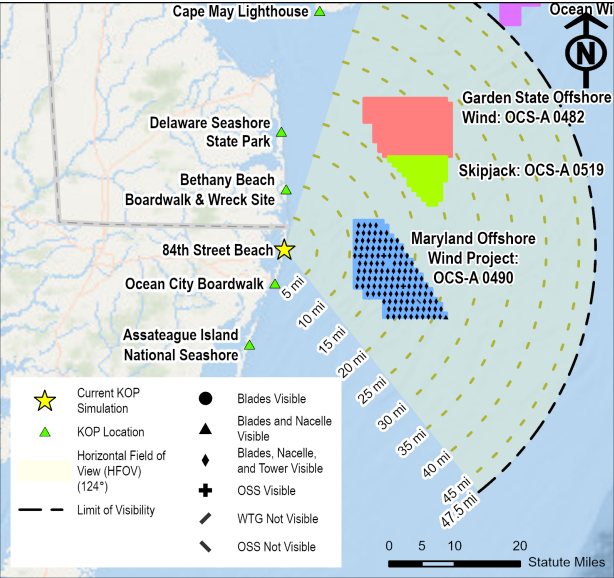
 1" Measured On Screen – View from 20" Away

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 22 84TH STREET BEACH, MARYLAND
Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations
Scenario 2, Maryland Offshore Wind Project and Projects Already or Considered Constructed


SHEET 3 - EXISTING CONDITIONS PANORAMA VIEW (124°)





ENVIRONMENT	
Weather Conditions:	Slight Haze
Temperature:	66° F
Humidity:	79%
Lighting Conditions:	Lit from SE
Visibility:	10 Miles
VIEW AND CAMERA DETAILS	
Ground Elevation (ft msl):	9.1
Camera/Viewing Elevation (ft msl):	5.1
Camera Used for Simulation Photography:	Nikon D850
Camera Lens Brand, Type, Focal Length:	Nikon Fixed 50 mm
Photo Resolution:	1200 DPI
Horizontal Field of View (Panoramas):	124°
Horizontal Field of View (Single Frame 50 mm Lens):	39.6°
Atmospheric Refraction Coefficient (k):	0.143

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:

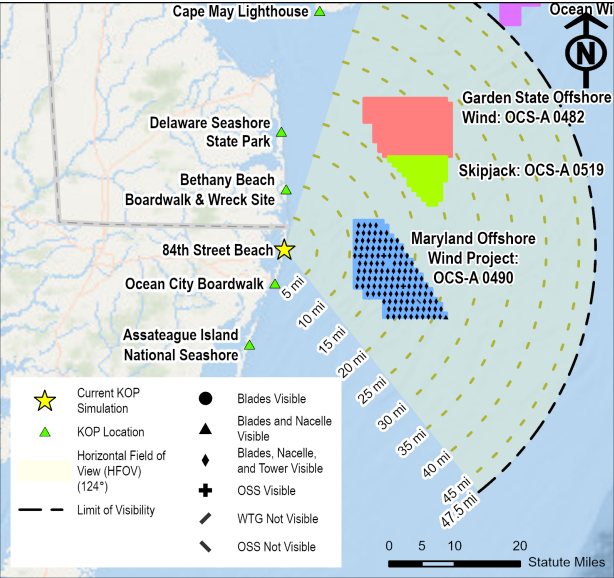
 1" Measured On Screen – View from 20" Away

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

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





ENVIRONMENT	
Weather Conditions:	Slight Haze
Temperature:	66° F
Humidity:	79%
Lighting Conditions:	Lit from SE
Visibility:	10 Miles
VIEW AND CAMERA DETAILS	
Ground Elevation (ft msl):	9.1
Camera/Viewing Elevation (ft msl):	5.1
Camera Used for Simulation Photography:	Nikon D850
Camera Lens Brand, Type, Focal Length:	Nikon Fixed 50 mm
Photo Resolution:	1200 DPI
Horizontal Field of View (Panoramas):	124°
Horizontal Field of View (Single Frame 50 mm Lens):	39.6°
Atmospheric Refraction Coefficient (k):	0.143

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 22 84TH STREET BEACH, MARYLAND

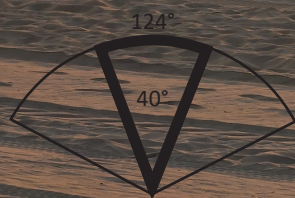
Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations

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

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

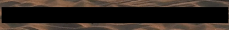
PROJECT EXTENTS





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" 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:

 1" Measured On Screen – View from 20" Away

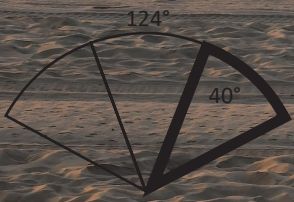
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KOP 22 84TH STREET BEACH, MARYLAND

Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations
Scenario 2, Maryland Offshore Wind Project and Projects Already or Considered Constructed

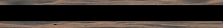
SHEET 6 - SINGLE FRAME (50-mm LENS) SIMULATION, LEFT VIEW AND PROJECT EXTENTS





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" 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:

 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
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SHEET 7 - SINGLE FRAME (50-mm LENS) SIMULATION, RIGHT VIEW AND PROJECT EXTENTS





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" 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:

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 22 84th STREET BEACH, MARYLAND
Maryland Offshore Wind Project Cumulative Visual Effects Assessment Simulations
Scenario 2, Maryland Offshore Wind Project and Projects Already or Considered Constructed

SHEET 8 – SUPPLEMENTAL SINGLE FRAME (40°) LEFT VIEW (1:00 PM)





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" 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.

1" Measured On Screen – View from 20" Away

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KOP 22 84th STREET BEACH, MARYLAND

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SHEET 9 – SUPPLEMENTAL SINGLE FRAME (40°) RIGHT VIEW (1:00 PM)

