



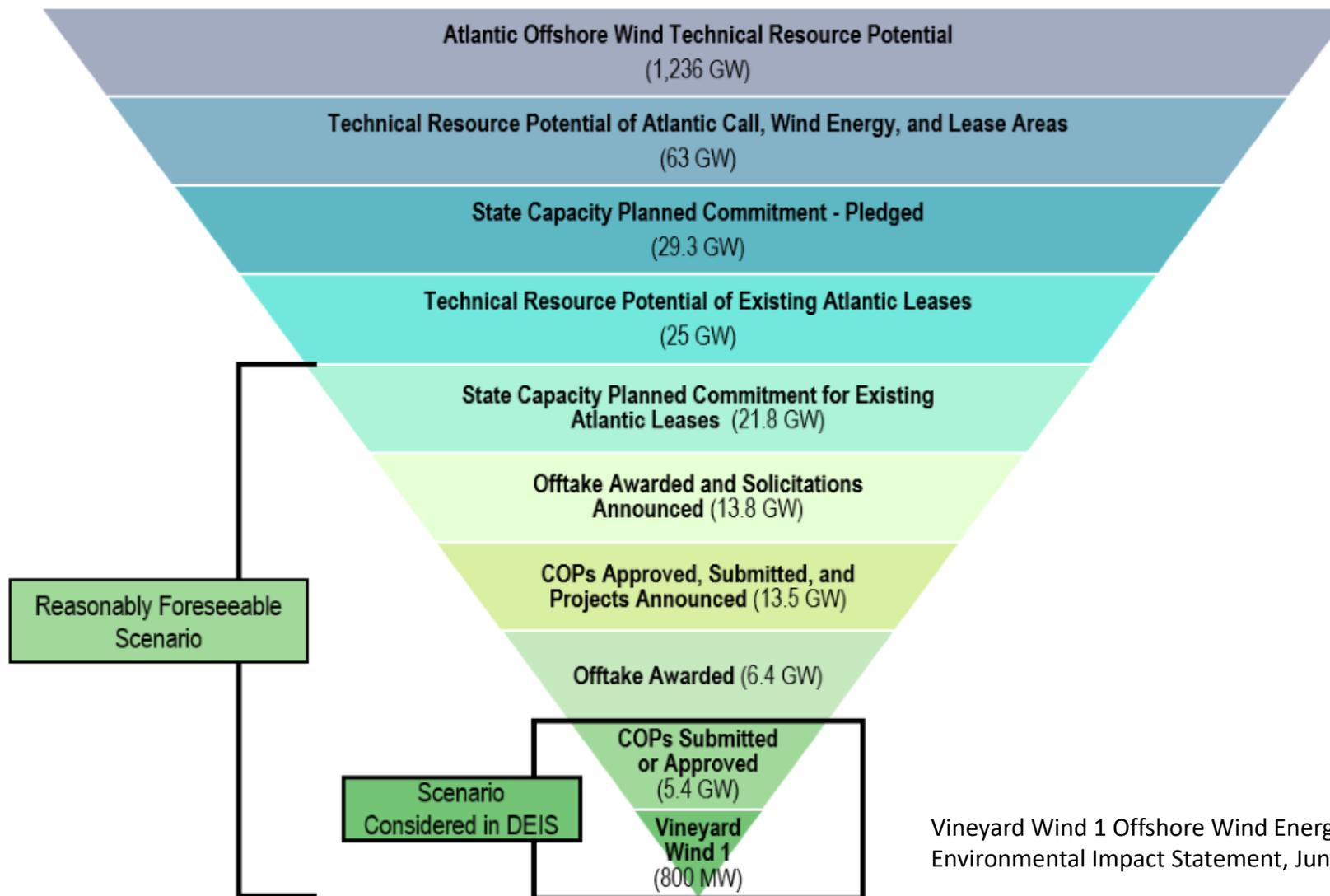
Assumptions Needed when Building the Cumulative Impact Scenario for the Atlantic OCS

State of the Science Workshop
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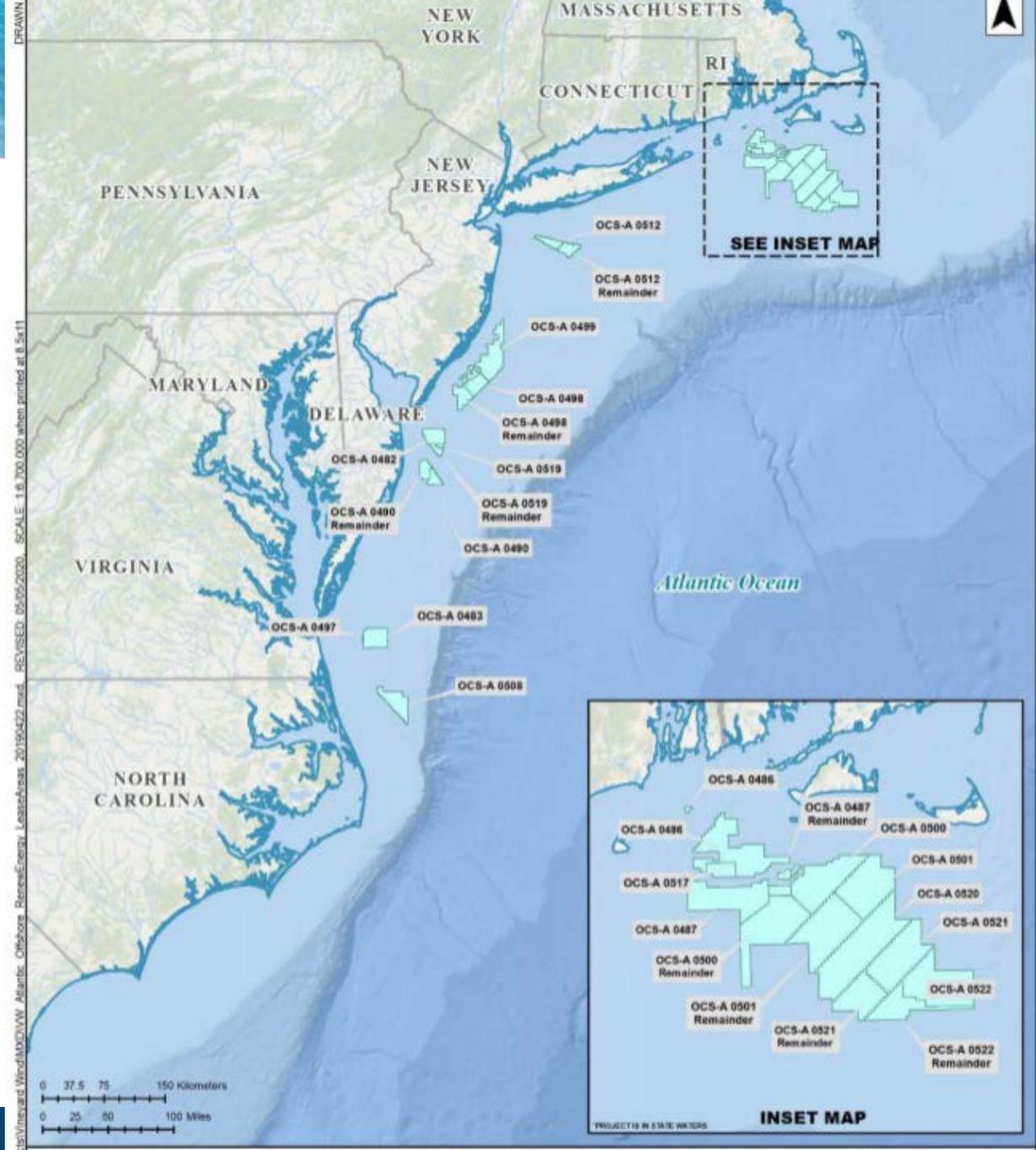
Scope of Future Possible Development of Offshore Wind



Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement, June 2020



- All Atlantic leases considered for their potential for development based on state goals and announced projects
- Leased areas with no associated project are assumed to be built out to the extent necessary for nearby states to meet their scheduled and anticipated offshore wind commitments
- Assumptions based on best available information are made for development details not yet known



Assumptions for a Maximum Case Scenario

Timing of Future Construction

All announced schedules for projects are kept and all announced and planned state procurements happen on schedule.

Any delays would mean a less rapid buildout than considered in the scenario, reducing impacts relating to footprint over time and concurrent construction.



Assumptions for a Maximum Case Scenario

Turbine Size

Largest turbine presently commercially available, which in 2020 is a 12 MW turbine.

While technology is expected to advance, this allows for specific dimensions and specifications to be referenced.

Larger capacity turbines would reduce the total number of structures needed to meet demand, reducing impacts



Assumptions for a Maximum Case Scenario

Vessel Availability

Any issues concerning vessel availability will be solved for each project.

It is unclear whether there will be adequate numbers of vessels capable of supporting the number of overlapping construction schedules.

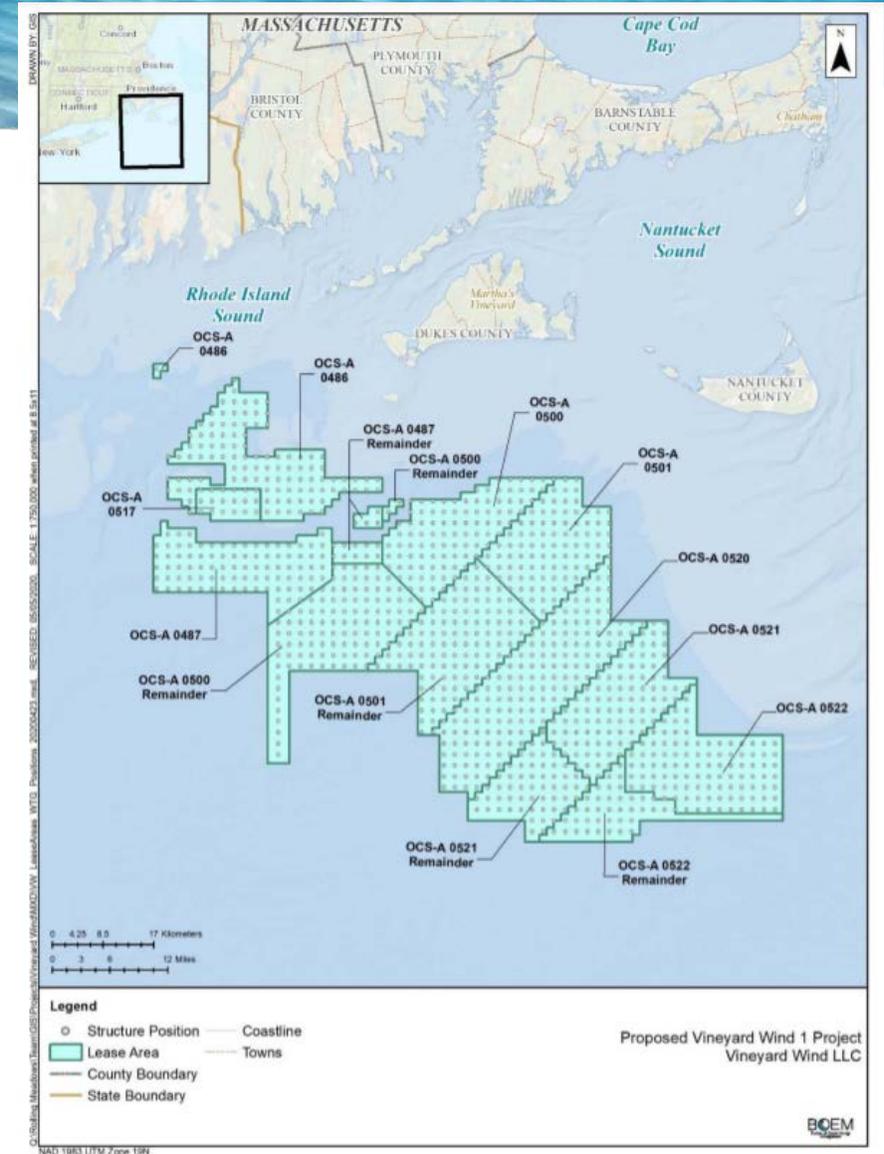
Should there be a shortage of needed vessels of any type, this would lead to project delays.



Assumptions for a Maximum Case Scenario

Turbine Array Layouts and Density

All future development in the NE follows a 1 nm x 1 nm East-West grid, and other regions have similar structure capacity but region-specific appropriate spacing and orientation.



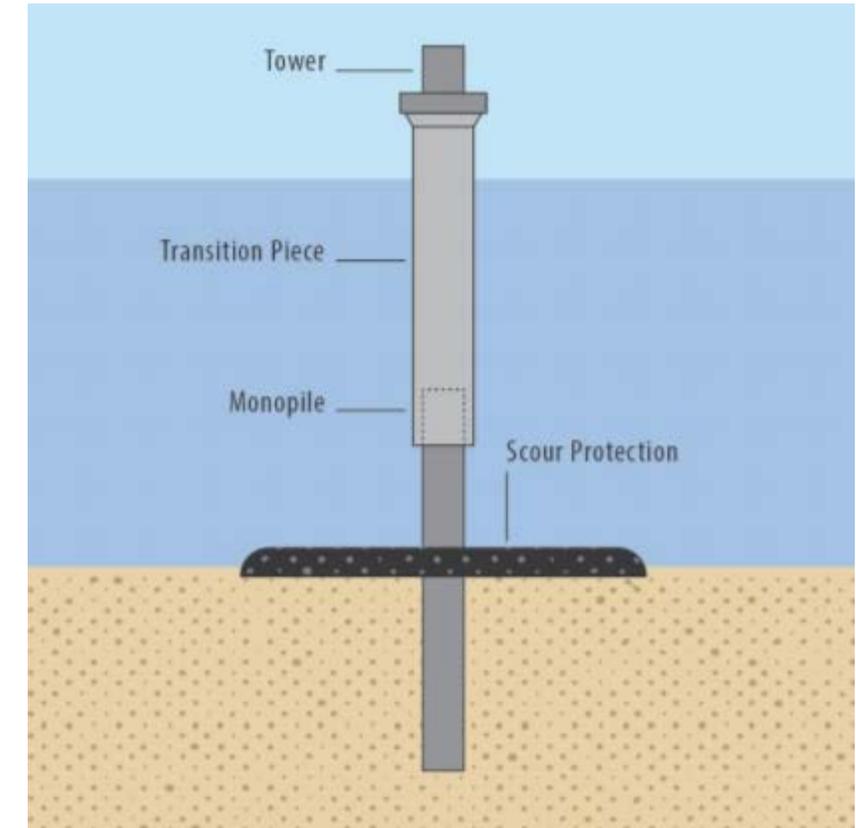
Vineyard Wind 1 SEIS, p. A-41

Assumptions for a Maximum Case Scenario

Foundation types

Fixed foundations with impacts consistent with the largest monopiles commercially available.

Foundation selection is largely based on seabed conditions and water depth. To the extent that development uses other foundations such as gravity or suction buckets, impacts will be reduced from what is considered in the scenario.

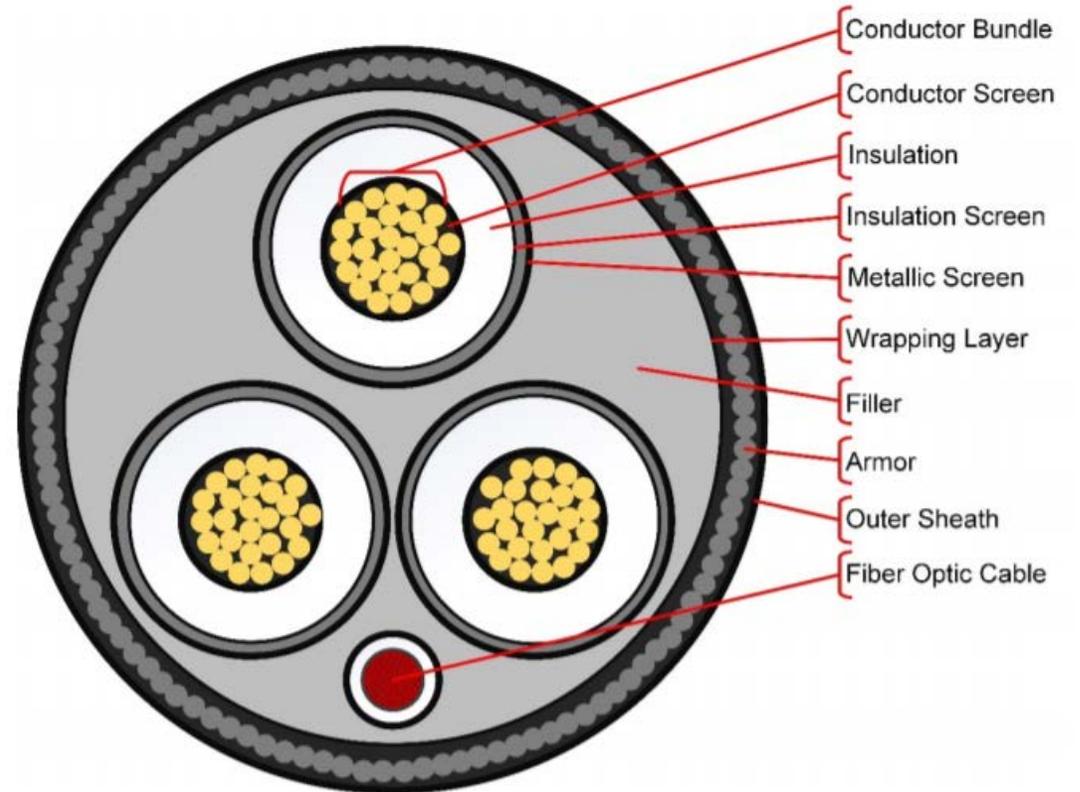


Transmission Infrastructure

All challenges onshore and offshore will be solved.

The scenario also assumes radial transmission for projects.

Should regional transmission systems develop, impacts will likely be less than what is considered in the scenario.



Region	Lease Remainder ¹	Status	Resource/Projects					Turbine Number					Estimated Foundation Number					(Acres)							
			Air	Water	Benthic	Birds/Bats/Fish-Invertebrates-EFH/Marine Mammals/Sea Turtles/Commercial Fisheries	Navigation	Demographics/Environmental Justice/Cultural/Visual/Recreation-Tourism/Other Uses	Air ¹⁴	Water ¹⁴	Benthic ¹⁴	Birds/Bats/Fish-Invertebrates-EFH/Marine Mammals/Sea Turtles/Commercial Fisheries	Navigation	Demographics/Environmental Justice/Cultural/Visual/Recreation-Tourism/Other Uses	Air	Water	Benthic		Birds/Bats/Fish-Invertebrates-EFH/Marine Mammals/Sea Turtles/Commercial Fisheries	Navigation	Demographics/Environmental Justice/Cultural/Visual/Recreation-Tourism/Other Uses				
NE	Aquaventis (state waters)	State Project				X					2						2								
NE	Block Island (state waters)	Built				X					5						5							1	
	Total State Waters										7						7							1	
MA/RI	Vineyard Wind 1 (Proposed Action) part of OCS-A 0501	COP, PPA	X	X	X	X	X	X	100	100	100	100	100	57	102	102	102	102	102	59	2	2	2	2	2
MA/RI	South Fork, part of OCS-A 0517	COP, PPA		X		X	X	X		9		15	15	10		10		16	16	11		0		1	1
MA/RI	Sunrise, parts of OCS-A 0500 and OCS-A 0487	PPA	X	X		X	X	X	51	8		110	110	73	52	9		112	112	75	2	0		4	4
MA/RI	Revolution, part of OCS-A 0486	COP, PPA	X	X		X	X	X	7	83		88	88	59	7	85		90	90	61	0	3		4	4
MA/RI	Vineyard Wind South OCS-A 0501 remainder (Park City Wind)	PPA	X	X	X	X	X	X	101	67	67	101	101	67	103	69	69	103	103	69	4	3	3	4	4
MA/RI	Mayflower (North), part of OCS-A 0521	PPA	X	X	X	X	X	X	101	25	25	101	101	67	103	26	26	103	103	69	4	1	1	4	4
MA/RI	Bay State Wind Project, part of OCS-A 0500	COP (unpublished), the MW is included in the description below in the 7,304 MW.	X	X	X	X	X	X																	
MA/RI	OCS-A 0500 and OCS-A 0487 remainder	This group may collectively support up to 5,296 MW of development--for MA (1,600 MW remaining), CT (1,196 MW remaining), and NY (up to 2,500 MW remaining). This would result in a total of 441 turbines based on the assumed 12 MW turbine. Collectively the technical capacity is 7,304 MW.	X	X	X	X	X	X	445	237	220	609	609	610	454	242	225	621	621	622	18	10	9	25	25
MA/RI	OCS-A 0520 (Equinor MA)		X	X	X	X	X	X																	
MA/RI	OCS-A 0521 remainder		X			X	X	X																	
MA/RI	Liberty Wind, part of OCS-A 0522					X	X	X																	
MA/RI	OCS-A 0522 remainder					X	X	X																	
	Remaining MA/RI Lease Area Total ²	73%							322	172	160	441	441	442	329	175	163	450	450	451	13	7	7	18	18
	Total MA/RI Leases²								681	464	352	955	955	775	695	475	359	975	975	795	26	17	12	37	37

Vineyard Wind SEIS, Table A-4 on pg. A-12



Contact Information

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Where to read more about the cumulative impact scenario in the Vineyard Wind 1 SEIS:

- Section 1.2: Methodology for Assessing Cumulative Impacts
- Appendices A and B

