

Associated IPRs: Sub-IPRs	Ongoing Activities	Future Non-Offshore Wind Activities Intensity/Extent	Future Offshore Wind-related Activities Intensity/Extent	Vinyard Wind 1 Project-related Activities Intensity/Extent	Conclusion
Climate change	<p>The construction, operation, and decommissioning of offshore wind projects would produce GHG emissions (nearly all CO₂) that can contribute to climate change; however, these contributions would be minuscule compared to aggregate global emissions. CO₂ is relatively stable in the atmosphere and generally mixed uniformly throughout the troposphere and stratosphere. GHG emissions do not depend upon the source location. Increasing energy production from offshore wind projects would likely decrease GHG emissions by replacing energy from fossil fuels.</p>	<p>Development of future onshore wind projects would produce a small overall increase in GHG emissions over the next 30 years. However, these contributions would be very small compared to the aggregate global emissions. The impact on climate change from these activities would be very small.</p> <p>As more projects come online, some reduction in GHG emissions would be expected from modifications of existing fossil-fuel facilities to reduce power generation. Overall, it is anticipated that there would be no collective impact on global warming as a result of onshore wind project activities.</p>	<p>Development of offshore wind projects and the construction, implementation, operation, maintenance, and the eventual decommissioning would cause some minuscule GHG emissions. Overall there should be some net reduction on both GHG emissions and criteria pollutants, including ozone precursors such as SO_x.</p> <p>Through reduction in emissions from fossil-fuel power generating facilities. In general, the GHG emissions associated with the construction, implementation, operation, maintenance, and the eventual decommissioning of future offshore wind projects can be assumed to contribute to climate change. However, these contributions would be minuscule compared to the aggregate global emissions of GHG; therefore, they cannot be deemed significant, if their impact could even be detected.</p>	<p>The construction, operation, and decommissioning activities associated with the Proposed Action would produce GHG emissions (nearly all CO₂) that can contribute to climate change; however, these contributions would be minuscule compared to aggregate global emissions. CO₂ is relatively stable in the atmosphere and generally mixed uniformly throughout the troposphere and stratosphere. Hence the impact of GHG emissions does not depend upon the source location. Increasing energy production from offshore wind projects would likely decrease GHG emissions over the next 30-year period. However, these contributions would be very small compared to the aggregate global emissions of GHG; therefore, they cannot be deemed significant, if their impact could even be detected. The additional GHG emissions anticipated from the Proposed Action over the 30-year period would have a negligible incremental contribution to existing GHG emissions. Therefore, the Proposed Action would have negligible impacts on climate change during these activities and an overall minor beneficial impact on both GHG emissions and criteria pollutants. Developing some onshore wind projects would likely decrease some GHG emissions and criteria pollutants, including ozone precursors such as SO_x. As a result of increased energy generation from offshore wind projects. Overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects, including the Proposed Action alone, though they may beneficially contribute to a broader combination of actions to reduce future impacts from climate change.</p>	<p>The Proposed Action would produce GHG emissions as stated above; however, the contributions would be minuscule compared to aggregate global emissions. The additional GHG emissions anticipated from the Proposed Action over the 30-year period would have a negligible incremental contribution on existing GHG emissions. Therefore, the Proposed Action would have negligible impacts on climate change during these activities and an overall minor beneficial impact on GHG emissions compared to the generation of the same amount of energy by the existing grids. Because GHG emissions spread out and mix within the atmosphere, the climate regional GHG emissions are a function of global emissions. Development of offshore wind projects would likely decrease some GHG emissions and criteria pollutants, including ozone precursors such as SO_x, and the eventual decommissioning activities would cause some GHG emissions increases primarily through emissions of CO₂. However, these contributions would be minuscule compared to aggregate global emissions. In context of reasonably foreseeable environmental trends, the combined GHG emissions on air quality from ongoing and planned actions, including the Proposed Action, would likely result in a minor beneficial impact from the net decrease in both GHG emissions and criteria pollutants, including ozone precursors such as NO_x, as fossil-fuel-type facilities reduce operations as a result of increased energy generation from offshore wind projects. Overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects, including the Proposed Action alone, though they may beneficially contribute to a broader combination of actions to reduce future impacts from climate change.</p>

% = percent; BOREX = Bureau of Ocean Energy Management; CAA = Clean Air Act; CO₂ = carbon dioxide; DRS = Draft Environmental Impact Statement; GHG = greenhouse gas; IAP = hazardous air pollutant hazard = hazardous materials; IPR = impact modeling factor; MAASOS = National Ambient Air Quality Standards; NO_x = nitrogen dioxide; OXM = operations and maintenance; PAF = particulate matter with diameter 2.5 microns or smaller; PM₁₀ = particulate matter with diameter 10 microns or smaller; ppb = part per billion; SO_x = sulfur dioxide; USC = United States Code; USEPA = U.S. Environmental Protection Agency; VOC = volatile organic compound; WDA = Wind Development Area