

IPC Chesapeake Waters Climate Renewable Wind Energy

I. Climate Change, Environment and Clean Renewable Wind Energy

“Wind is a renewable energy source. Overall, using wind to produce energy has fewer effects on the environment than many other energy sources. Wind turbines do not release emissions that can pollute the air or water (with rare exceptions), and they do not require water for cooling. Wind turbines may also reduce electricity generation from fossil fuels, which results in lower total air pollution and carbon dioxide emissions.

An individual wind turbine has a relatively small physical footprint. Groups of wind turbines, sometimes called wind farms, are located on open land, on mountain ridges, or offshore in lakes or the ocean.”

U.S. Energy Information Administration

Wind Energy Explained: Wind Energy and the Environment/ Types of Turbines/History

<https://www.eia.gov/energyexplained/wind/>

<https://www.eia.gov/energyexplained/wind/history-of-wind-power.php>

<https://www.eia.gov/energyexplained/wind/where-wind-power-is-harnessed.php>

<https://www.eia.gov/energyexplained/wind/types-of-wind-turbines.php>

<https://www.eia.gov/energyexplained/wind/wind-energy-and-the-environment.php#:~:text=Wind%20is%20a%20renewable%20energy,not%20require%20water%20for%20cooling>

U.S. Energy Sources: Primary/Secondary, Renewable/Fossil/Nuclear

<https://www.eia.gov/energyexplained/us-energy-facts/>

<https://www.eia.gov/energyexplained/us-energy-facts/>

U.S. Energy Facts: States and Territories

<https://www.eia.gov/energyexplained/us-energy-facts/state-and-us-territory-data.php>

II. Chesapeake Bay Watershed/Mid-Atlantic Offshore Wind Energy and Power

Chesapeake Bay Foundation: Water, Climate, Environment and Energy

Air Pollution – The Invisible Threat

<https://www.cbf.org/issues/air-pollution/>

Chesapeake Bay Airshed and Watershed

<https://cbforg.maps.arcgis.com/apps/instant/sidebar/index.html?appid=1affcb533b624022ab5025ca8c942b2d>

Climate Change

<https://www.cbf.org/issues/climate-change/>

Energy

<https://www.cbf.org/issues/energy/>

Offshore Wind Energy

Offshore Wind Energy - State of Maryland

Offshore wind holds the greatest opportunity for Maryland to decarbonize its economy while revitalizing sectors of the manufacturing, maritime, and port logistics industries.. The U.S. Department of Energy estimates offshore wind could generate roughly twice the amount of electricity the nation consumes annually, with 80 percent of the demand consumed in major cities along the coasts.

In an effort to encourage offshore wind development off Maryland's coast, the State enacted a series of policies and legislation, starting with the Maryland Offshore Wind Energy Act of 2013. This initiative revised the Renewable Portfolio Standard (RPS) goal to source 25 percent of all electricity consumed in the State from renewable energy by the year 2020 and created a "carve-out" for offshore wind not to exceed 2.5 percent (about 500 MW) of the overall RPS.

<https://energy.maryland.gov/Pages/Info/renewable/offshorewind.aspx>

Webinars:

- [Understanding Offshore Wind](#)
- [Getting Involved in Offshore Wind](#)
- [Offshore Wind Program Overview](#)

Wind Energy – State of Virginia

As the state experiences an unprecedented boom in AI and data center infrastructure, maintaining our position as the best state for business requires addressing the subsequent unprecedented power demand.

Wind energy, with its potential for sustainable and clean power generation, could play an important role in meeting these needs. However, global supply chain issues and reliance on foreign imports pose significant risks to our energy security. Recognizing this, Virginia is committed to developing strategic partnerships and investing in domestic solar manufacturing to reduce dependence on foreign sources.

As part of Governor Youngkin's all-American, all-of-the-above energy plan, wind energy is integrated alongside other energy sources like nuclear and natural gas to ensure a reliable,

affordable, and increasingly clean energy future for Virginia. This approach not only addresses energy demands and helps us to remain responsible environmental stewards, but it also strengthens our energy independence and security.

Most of state's wind energy potential lies offshore, where state boasts significant wind resources along its Atlantic coast. Virginia's first offshore wind farm, the Coastal Virginia Offshore Wind project, is owned and operated by Dominion Energy and is located 27 miles off the shores of Virginia Beach. The project is slated for completion in 2026 and will consist of 176 turbines, support 1,000 jobs, and provide emission-free power for up to 660,000 homes.

<https://energy.virginia.gov/offshore-wind/Landing-page.shtml>

<https://energy.virginia.gov/offshore-wind/Landing-page.shtml>

<https://coastalvawind.com>

<https://energy.virginia.gov/va-energy-plan.shtml>

Wind Energy – State of Pennsylvania

Clean energy resources are critical to improving air quality in Pennsylvania, protecting the health of residents, helping to reduce Pennsylvania's carbon footprint, and addressing climate change, the most critical environmental threat confronting the world. Renewable, clean energy resources support good-paying jobs and present ever-growing economic development opportunities.

Renewable energy provides many benefits.. According to the [U.S. Energy Information Administration\(opens in a new tab\)](#), wind energy was the state's largest renewable source for electricity generation and provided about two-fifths of the state's renewable electricity in 2020. Wind resources for commercial power production are found on the state's Appalachian Mountain crests stretching southwest to northeast and along the state's Lake Erie shoreline. As of mid-2021, the state had 26 operating wind farms with almost 1,500 megawatts of generating capacity.

<https://www.pa.gov/agencies/dep/residents/saving-energy/renewables.html#accordion-2e9fe1e019-item-f4a07dfab0>

Wind Energy - New York State Government

Offshore wind energy is poised to become a major source of affordable, renewable power for New York. The State is well on the way to developing 9,000 megawatts of offshore wind energy by 2035, enough to power up to 6 million homes.

As a national leader in clean energy policy, New York is emerging as the hub for the United States' growing offshore wind energy industry. NYSERDA is leading the coordination of offshore wind opportunities in New York State and is supporting the development of 9,000 megawatts of offshore wind energy by 2035 in a responsible and cost-effective manner. Offshore wind will be a crucial step on the pathway to a carbon-neutral economy and a critical component in achieving the expanded Clean Energy Standard, whereby 70 percent of New York's electricity will come from renewable sources by 2030 under the Climate Leadership and Community Protection Act, New York's ambitious and comprehensive climate and clean energy legislation.

<https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Climate-Change-and-Offshore-Wind>

<https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/About-Offshore-Wind/NYSERDA-Offshore-Wind-Program>

<https://www.nyserda.ny.gov/All-Programs/Offshore-Wind>

Wind Energy – Government of Delaware

Delaware continues to explore opportunities and challenges presented by the growing offshore wind industry. The state has set a target of achieving 40% renewable energy by 2035. Increasing renewable energy in Delaware is also identified as a strategy in [Delaware's Climate Action Plan](#) to reduce harmful greenhouse gas emissions that are driving climate change.

Legislation passed in the 2023 session directed the Department of Natural Resources and Environmental Control to continue to work with PJM Interconnection, LLC to study the transmission impacts of offshore wind development, to work with neighboring states on offshore wind transmission, and to study and report back to the Governor and the General Assembly on a process for procuring offshore wind power.

<https://documents.dnrec.delaware.gov/energy/offshore-wind/Offshore%20Wind%20Working%20Group%20Report%20June%2029%202018.pdf>

<https://documents.dnrec.delaware.gov/energy/offshore-wind/Proposed-Offshore-Wind-Procurement-Strategy-20231229.pdf>

<https://dnrec.delaware.gov/climate-coastal-energy/renewable/offshore-wind/>

Renewable Wind Energy and Water: Chesapeake Bay and Atlantic Ocean

“BOEM is responsible for offshore renewable energy development in Federal waters. The program began in 2009, when the Department of the Interior (DOI) announced the final regulations for the Outer Continental Shelf (OCS) Renewable Energy Program, which was authorized by the Energy Policy Act of 2005 (EPAAct). These regulations provide a framework for all of the activities needed to support production and transmission of energy from sources other than oil and natural gas. BOEM anticipates future development on the OCS from these general sources:”

Offshore Wind Energy

Ocean Wave Energy (Hydrokinetic)

Ocean Current Energy (Hydrokinetic)

Alternative Uses of Existing Oil and Gas Platforms

Offshore Solar

<https://www.boem.gov/renewable-energy/renewable-energy-program-overview>

III. United States: National/States/Territories

1. United States Climate Alliance

The U.S. Climate Alliance is a bipartisan coalition of [24 governors](#) securing America's net-zero future by advancing state-led, high-impact climate action. **54% of the U.S. Population - 57% of the U.S. Economy**

- Reducing Emissions
- Accelerating Action
- Centering Equity
- Tracking Progress

<https://usclimatealliance.org/>

<https://usclimatealliance.org/about/>

<https://usclimatealliance.org/members/>

<https://usclimatealliance.org/member-support/>

https://data.usclimatealliance.org/climate-policy-database?policy_types=target_goal&states=CT,MA,NY,NJ,MD,RI,VT,ME,DE,NC,PA&tags=offshore%20wind

IV. Clean Renewable Wind Energy

U.S. Department of Energy

1. Offshore Wind Guide – U.S. Department of Energy – December 2024

<https://www.nrel.gov/docs/fy25osti/88620.pdf>

2. Wind Energy Market Reports

<https://www.energy.gov/eere/wind/wind-energy-market-reports>

3. Offshore Wind Market Report

<https://www.energy.gov/eere/wind/offshore-wind-market-report>

4. Land-Based Wind Market Report

<https://www.energy.gov/eere/wind/land-based-wind-market-report>

5. Distributed Wind Market Report

https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-36057.pdf

IV. Transatlantic: United States, United Kingdom, North Sea, Atlantic Ocean

What is offshore wind power?

<https://www.nationalgrid.com/stories/energy-explained/what-offshore-wind-power>

Onshore vs offshore wind energy: what's the difference?

<https://www.nationalgrid.com/stories/energy-explained/onshore-vs-offshore-wind-energy>

The Future of Offshore Wind Energy

<https://www.youtube.com/watch?v=3NpuC1XmdkA>

U.S. – European Union Energy Council

<https://www.energy.gov/articles/us-eu-high-level-business-forum-offshore-wind-power>

https://energy.ec.europa.eu/topics/international-cooperation/key-partner-countries-and-regions/unit-ed-states-america_en#eu-us-energy-council