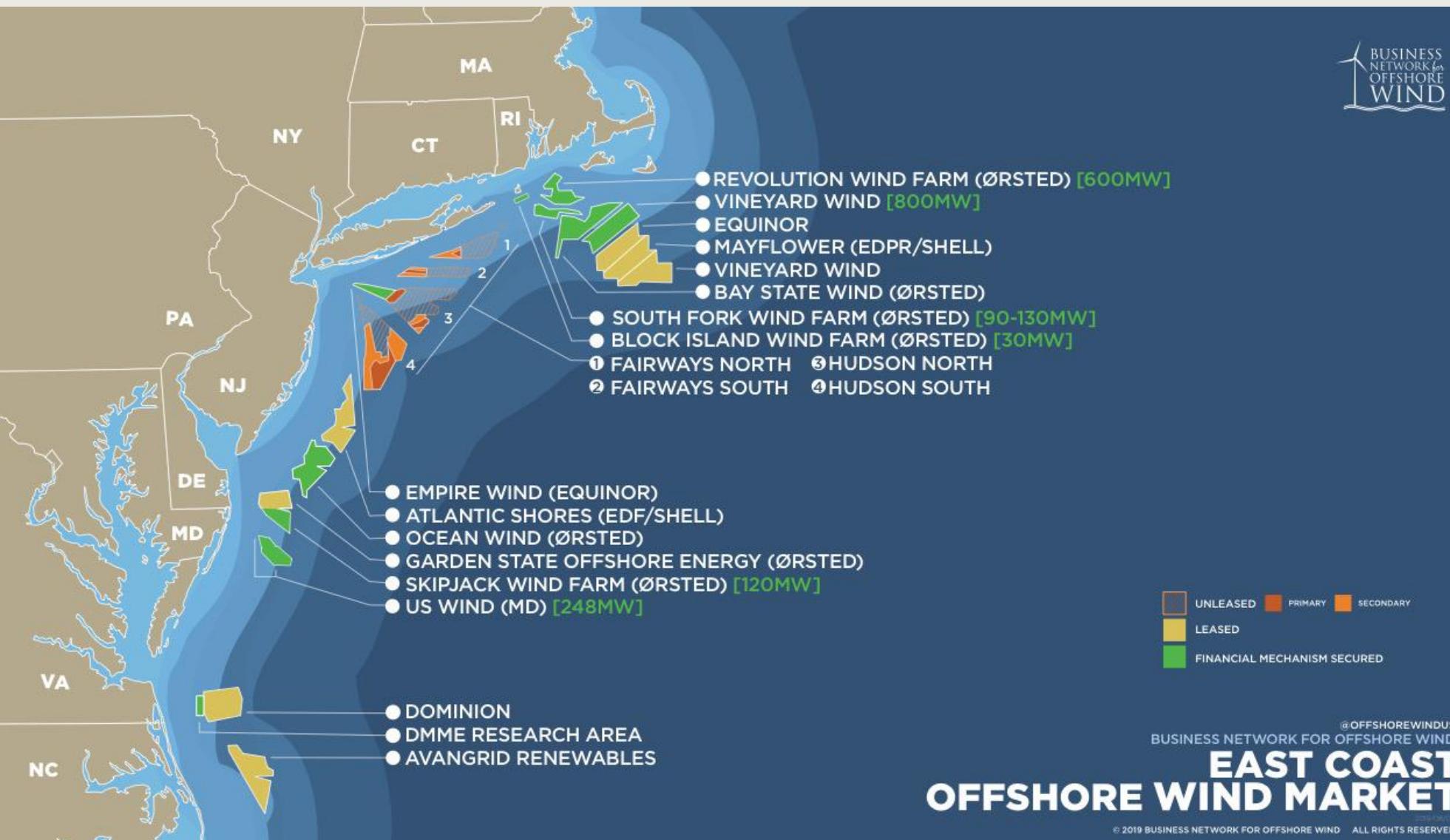




# Virginia's OFFSHORE WIND OPPORTUNITY





An aerial photograph of an offshore wind farm. The image shows several white wind turbines with long blades, standing on yellow cylindrical foundations in a deep blue ocean. The turbines are scattered across the horizon under a clear sky. The perspective is from above, looking down at the turbines.

The East Coast offshore wind  
pipeline ( $\sim 28\text{GW}$ ) exceeds all  
installed global wind energy  
capacity



East Coast:  
**\$70 billion** opportunity for US suppliers

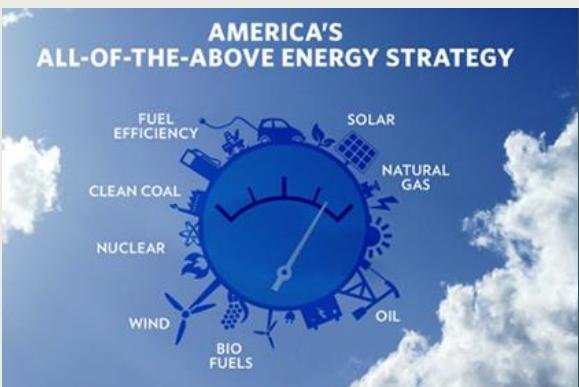
# Environmental Benefits



**Reduced Greenhouse Gas Emissions**



**Reduction in Other Types of Air Pollutants**



**Increased Energy Diversity and Security**



**Hampton Roads Planning District Commission  
Resolution 2018-02**

**Resolution of the Hampton Roads Planning District Commission supporting  
offshore wind development off the coast of Virginia**

**Whereas**, recent reports by the Virginia Department of Mines, Minerals and Energy have identified the potential for significant economic development opportunities for the Commonwealth of Virginia and the Hampton Roads region from the emerging offshore wind industry; and

**Whereas**, the U. S. East Coast opportunity for offshore wind extends from South Carolina to New England and has a twenty-year buildout potential of 20,000 megawatts of installed capacity (2,000 – 3,000 wind turbines) with the potential to generate over 14,000 jobs in the construction, maintenance, manufacturing and other service related industries; and

**Whereas**, Dominion Energy contracted in 2017 with a global wind leader, Ørsted Energy of Denmark, to build Coastal Virginia Offshore (CVOW), a two turbine, 12 MW demonstration project located 23.5 nautical miles offshore from the Virginia Beach coastline. The CVOW project is targeted for completion in 2020 and will lay the groundwork for potential large-scale commercial development up to 2,000 MW; and

**Whereas**, studies of the market opportunities for attracting the offshore wind industry to the U. S. East Coast have identified several unique competitive advantages for Virginia and the Hampton Roads region, including:

- Pro-Business Climate
- America's Largest Shipbuilding Industry
- Unmatched Port Infrastructure
- Congestion-Free Harbor Navigation
- Progressive State Energy Policy
- Zero Air Draft for Ocean-Going Vessels
- High-Quality Workforce
- Abundant Waterfront Land and Infrastructure
- Strategic Geographic Location.



*Michael J. Hipple, Chairman*  
*Robert A. Crum, Jr., Executive Director*



*Laurie A. DiRocco, Chairman*  
*Robert W. Lazaro, Executive Director*

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January 30, 2019

The Honorable Members of the Senate of Virginia of the  
Hampton Roads and Northern Virginia Regions  
P. O. Box 396  
Richmond, VA 23218

The Honorable Members of the Virginia House of Delegates of the  
Hampton Roads and Northern Virginia Regions  
Pocahontas Building  
900 E. Main Street  
Richmond, VA 23219

RE: Offshore Wind Development Support

Dear Honorable General Assembly Members of Hampton Roads and Northern Virginia:

We write to you in support of efforts to advance the development of offshore wind in Virginia. Specifically, we ask that you support Governor Northam's budget proposal to create a Virginia Office for Offshore Wind within the Department of Mines, Minerals, and Energy to advance Virginia's offshore wind interests. The office would serve as a point-of-contact for businesses, help align industry needs with Virginia's maritime workforce capabilities, and develop a plan to achieve the Commonwealth's offshore wind energy goals.

The proposal to create a Virginia Office for Offshore Wind is one of several recommendations from a report released by Governor Northam titled, "The Virginia Advantage: The Roadmap for the Offshore Wind Supply Chain in Virginia". The "Roadmap" analyzes Virginia's strategic position in the emerging U.S. offshore wind industry and provides guidance for the development of an industrial supply chain to serve East Coast offshore wind projects.

Growth of an East Coast offshore wind industry holds tremendous economic development potential for the Commonwealth. Experts believe that the East Coast is one of the most promising areas for offshore wind development in the world. The "Roadmap" estimates that an East Coast pipeline of projects resulting in 8 gigawatts of installed capacity by 2030 would support up to 37,000 jobs per year.

# Coastal Virginia Offshore Wind Project

## Onshore Groundbreaking - July 1, 2019



# Coastal Virginia Offshore Wind (CVOW) Project

*In Construction with Completion expected in 2020*

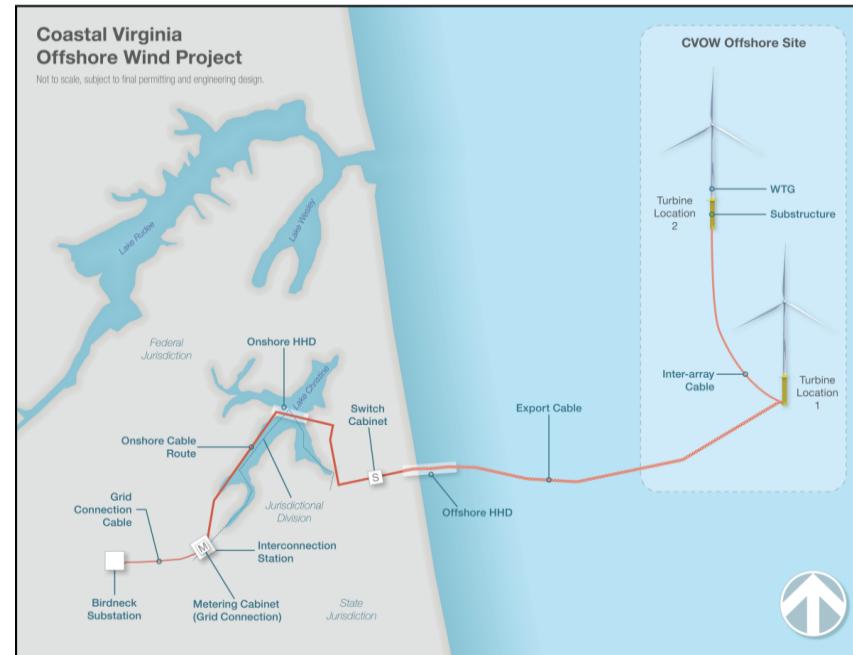


## Project Details

- Two 6-MW Wind Turbines
- Located 27 miles off Virginia Beach
- Capital Cost: \$300 million
- Major Participants
  - Ørsted = Offshore Installation
  - L.E. Meyers = Onshore Installation

## CVOW Benefits

- First Offshore Wind Turbines to be Installed in US Federal Waters
- Permit, design, installation & operations experience
- Refine BOEM approval process
- Inform larger commercial wind project



**Construction commenced June 2019**

## Siemens Turbine Nacelle in Esbjerg, Denmark (Same size as CVOW)



## Siemens Blades in the process of manufacture for CVOW project along with Ørsted Project Team





HOSTED BY



September 19 -20



## Northam sets state's goal for renewable energy: 100% by 2050

BY SARAH RANKIN  
Associated Press

to develop a plan by next summer for meeting the goal. It sets an intermediate

more aggressive than the voluntary goal Virginia enacted in 2007 or what

more electricity from renewables for state offices is doable through executive or

Power, said they were willing to work with the administration on the proposal.

infrastructure projects currently under development were at odds with it.

# The Virginian-Pilot

FRIDAY | 9.20.19 | PILOTONLINE.COM | Our 154th year | \$1.50 in Hampton Roads; \$2 in outlying areas

# Power for 650,000? It could be a breeze.

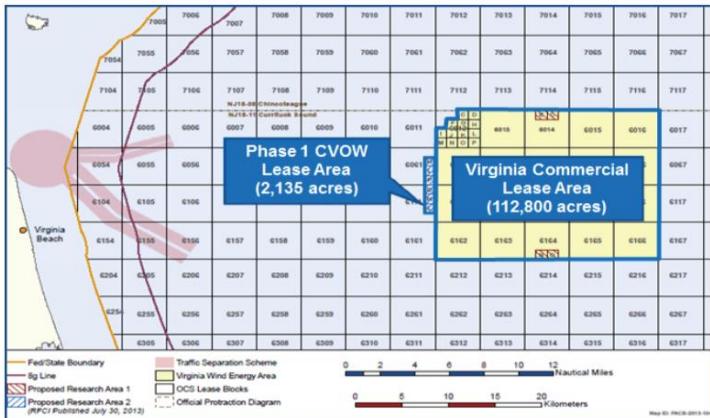
Dominion wants to build nation's largest offshore wind farm near Virginia Beach

BY DAVE RESS  
Staff writer



# Virginia Commercial Offshore Wind

## Project Summary



### Commercial Offshore Wind Lease Area

- 112,800 acre lease area 27 miles (27 statutory miles) off Virginia Beach.
- Will support 2,000 MW+ of generation
- Design of Electrical Interconnect will be critical to success of project.
- Data from CVOW will inform design of Commercial project.

Executed Lease with BOEM

2013

Site Assessment Plan  
Approved by BOEM

2016

File Interconnect

2019

Ocean survey work

2020

Construction Operations Plan  
Submission

2022

First block expected in service

2024

\*BOEM = Bureau of Ocean Energy Management



Ørsted



SIEMENS Gamesa  
RENEWABLE ENERGY

Vestas®



BUSINESS NETWORK FOR OFFSHORE WIND

## EAST COAST US OFFSHORE WIND PORTS

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# **New York State Launches Process to Upgrade Port Infrastructure to Support Expanding Offshore Wind Industry**

**Request for Qualifications is First Step to Inform a Future Competitive Solicitation for State Investment of up to \$200 Million to Upgrade New York's Port Infrastructure**

October 02, 2019

# Virginia's Unique Advantages



Unmatched Port Infrastructure



Unrestricted Air Draft



High-Quality Maritime Workforce



Abundant Waterfront Land



Congestion-Free Navigation



America's Largest Shipbuilding Industry



Strategic Location



Pro-Business Climate

# HAMPTON ROADS HARBOR

NEWPORT NEWS  
MARINE TERMINAL



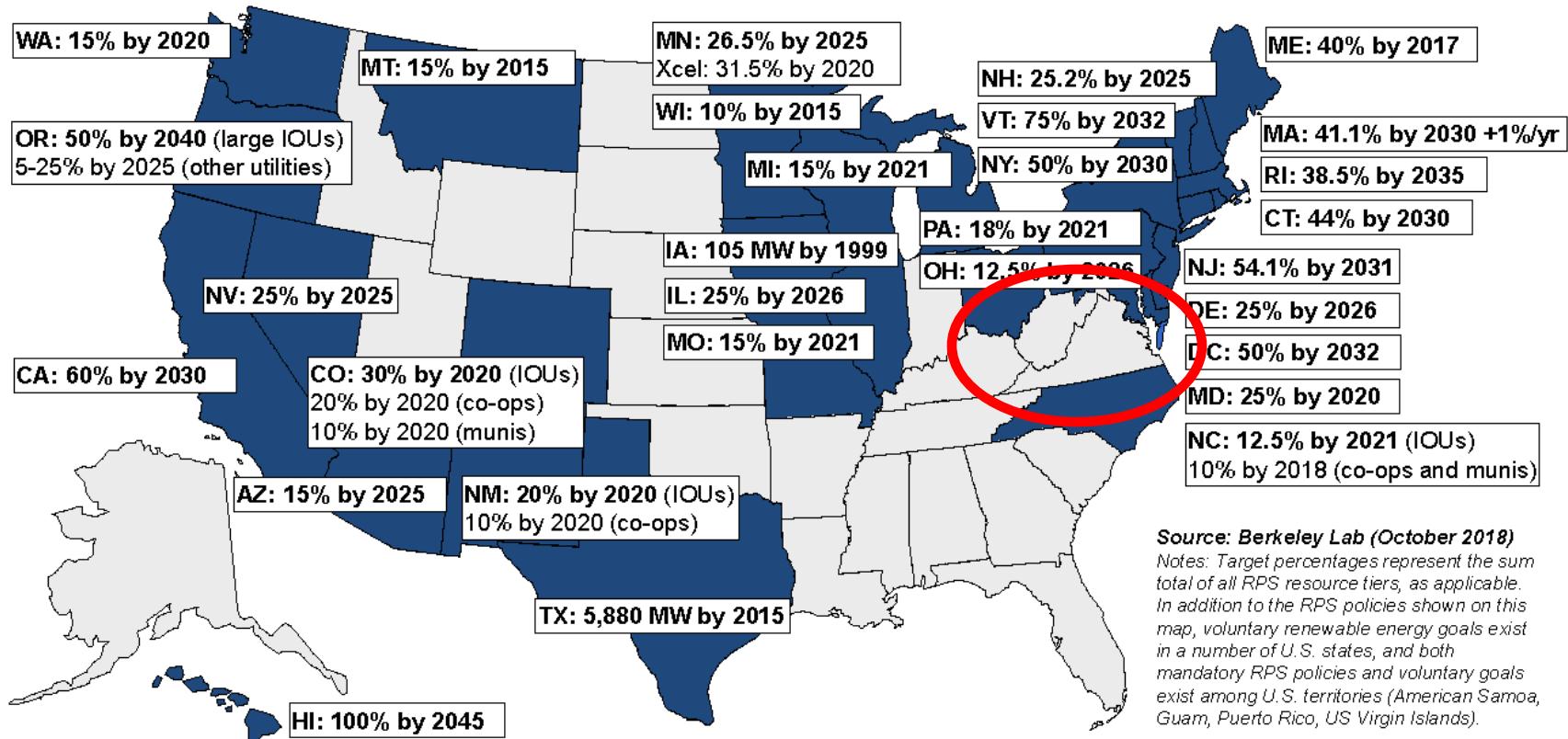
VIRGINIA INTERNATIONAL  
GATEWAY

FUTURE CRANEY ISLAND  
MARINE TERMINAL

NORFOLK  
INTERNATIONAL  
TERMINALS

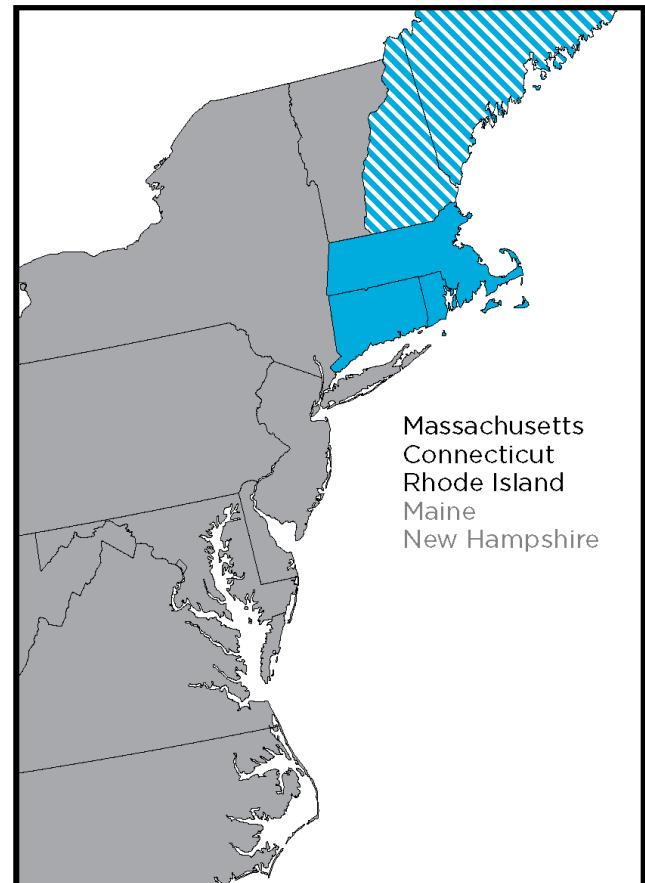
PORTSMOUTH MARINE TERMINAL





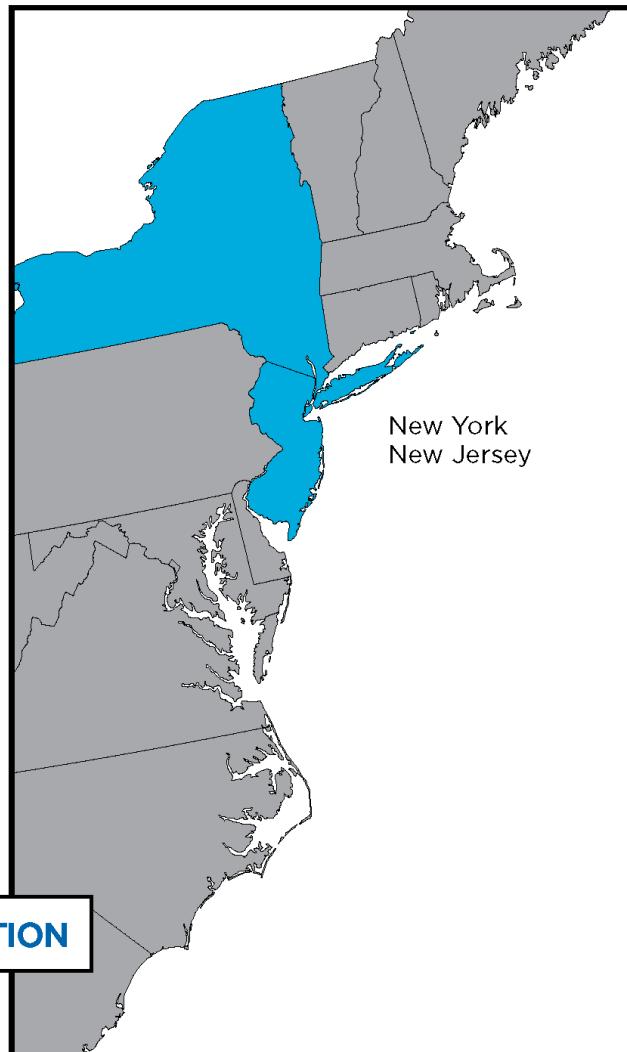
Source: Berkeley Lab (October 2018)

Notes: Target percentages represent the sum total of all RPS resource tiers, as applicable. In addition to the RPS policies shown on this map, voluntary renewable energy goals exist in a number of U.S. states, and both mandatory RPS policies and voluntary goals exist among U.S. territories (American Samoa, Guam, Puerto Rico, US Virgin Islands).

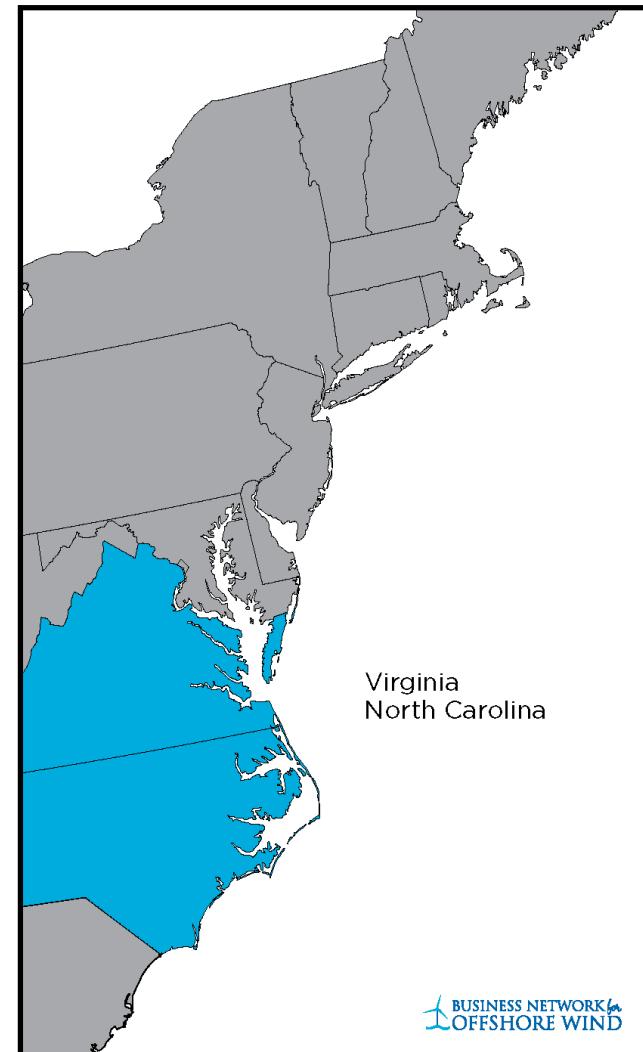


Massachusetts  
Connecticut  
Rhode Island  
Maine  
New Hampshire

**BEGINNING REGIONAL COLLABORATION**



New York  
New Jersey



Virginia  
North Carolina

Virginia has performance-based incentives for companies that locate or grow in the Commonwealth.



## Incentives

Virginia's incentive programs reduce the costs of opening or expanding a business facility, and we work enthusiastically to assist employers who choose to put down roots and grow in the Commonwealth. We view incentives as an investment in Virginia's economic future and a business opportunity for both the Commonwealth and the company.

# Contact Information

**Matt Smith** | Senior Regional Planner | Hampton Roads Planning District Commission  
757-420-8300 | [msmith@hrpdcva.gov](mailto:msmith@hrpdcva.gov)

