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Northeast States Release Three Reports on Offshore Wind Development

Industry Has Potential to Power Almost Four Million Homes and Provide Thousands of U.S. Jobs

Today, the States of Massachusetts, New York, and Rhode Island released three reports that set out the context for offshore wind development in the Northeast and reveal its potential economic development benefits.

The Northeast has the potential for offshore wind deployment of between 4,000 to 8,000 megawatts by 2030 and the creation of up to 36,000 jobs according to the reports, which were produced for representatives of the Massachusetts Clean Energy Center (MassCEC), the Massachusetts Department of Energy Resources, the New York State Energy Research Development Authority (NYSERDA), the Rhode Island Office of Energy Resources, and the Clean Energy States Alliance, as part of the Roadmap Project for Multi-State Cooperation on Offshore Wind Development. One report also detailed conceptual plans for two Jones Act-compliant vessels to serve the offshore wind industry.

The three reports released today are:

- Northeast Offshore Wind Regional Market Characterization identifies the opportunities and challenges that will shape the offshore wind market. It estimates the scale of potential offshore wind deployment to serve Northeast markets through 2030, given the nature of the offshore wind resource, federal lease opportunities, state policies, regional energy needs, existing electricity generation and planned retirements, and transmission capacity. The report finds that a low regional deployment trajectory could lead to 4,000 megawatts of offshore wind generation by 2030 off the Atlantic coast of the Northeast. A high regional deployment trajectory could lead to nearly 8,000 megawatts, which could power almost four million homes. The report also provides background information on topics ranging from interconnection infrastructure and permitting timelines to electricity markets and relevant public policies.
- <u>U.S. Job Creation in Offshore Wind</u> quantifies the job impacts of offshore wind development and specifies the types of jobs to be created. A high market scenario of 8,000 megawatts by 2030 would yield a peak of over 16,000 full-time equivalent (FTE) baseline jobs in the U.S. in 2028, with baseline jobs being ones for which there are no compelling reasons why the work would not be performed by U.S. workers. The jobs most likely to be performed in the U.S. include project development and management, supply and installation of electrical substations and subsea cable, and wind farm operation and maintenance. Additional jobs are also possible, with manufacturing jobs seen as the sector with the greatest potential. When the additional jobs that have a high or medium probability of being performed in the U.S. are included, the number of U.S. jobs would climb to over 36,000 FTE annually between 2026 and 2028. A low market scenario of 4,000 megawatts would create roughly half as many baseline jobs as the high scenario and a smaller proportion of high or medium probability jobs. The high scenario would also trigger more investment in new factories and vessels in the US.
- <u>U.S. Jones Act Compliant Offshore Wind Turbine Installation Vessel Study</u> examines the functional requirements and costs of constructing purpose-built vessels that would comply with the U.S. Jones Act and meet the needs of the U.S. offshore wind industry. The Jones Act requires any vessel transporting

cargo between U.S. ports, or between U.S. ports and offshore facilities, be built and flagged in the U.S. The study presents designs for two Jones Act compliant vessel options: a wind turbine installation vessel and a feeder barge. Estimating packages were sent to multiple U.S. shipyards and indicative prices of \$222 million for the wind turbine installation vessel and \$87 million for feeder barge were received. Using the cost data, a business model was created that showed 10-years of work, or a pipeline of approximately 3,500 to 4,000 megawatts of offshore wind capacity (roughly equivalent to the expected low regional offshore wind deployment trajectory), would provide the owner of a wind turbine installation vessel with a reasonable rate of return.

"Offshore Wind is gaining momentum as a significant new source of renewable energy in markets across the Northeast, and these reports demonstrate that this regional resource will create thousands of new American energy jobs in the process," said Alicia Barton, President and CEO, NYSERDA. "New York is proud to partner with other states in the Northeast to help advance offshore wind to market in a responsible and cost-effective way."

States will use the three reports' findings to identify opportunities for cooperative actions that can contribute to the responsible deployment of offshore wind in the Northeast at a scale necessary to reduce costs and establish a regional supply chain. The Roadmap Project is funded in part by a \$592,683 grant to NYSERDA from the U.S. Department of Energy's federally administered State Energy Program.

The low trajectory in the market characterization mirrors existing state policies for offshore wind, including the 2016 Act to Promote Energy Diversity in Massachusetts, New York's Clean Energy Standard, and authorizing legislation in Rhode Island. Developing 8,000 megawatts would likely require states in the Northeast committing to additional procurements.

"As host to the nation's very first offshore wind farm, currently generating 30 megawatts off the southern coast of Block Island, we see these reports as key to laying the foundation for this growing industry," said State Energy Commissioner Carol Grant. "The states in the region have individually taken important steps to advance offshore wind. The release of the new reports exemplifies how the states are also working together to advance offshore wind deployment and supply chain development."

"The Baker-Polito Administration is committed to supporting the growth of offshore wind in the Commonwealth, as shown by last year's bipartisan energy diversification legislation authorizing the largest procurement of offshore wind in US history," said Massachusetts Department of Energy Resources Commissioner Judith Judson. "Today's reports are an important tool as we develop the offshore wind industry in Massachusetts and will help to inform our decision-making going forward."

For the jobs report, researchers looked at 17 sub-elements of the offshore wind supply chain—from blades, towers, cables, and foundations to project development and turbine maintenance—and determined how many jobs would be required to develop, install, and maintain the pipeline of projects in the high and low scenarios. They also identified 109 different occupations and found that there will be a significant need for technician-level workers, including in manufacturing roles; installation and commissioning positions; and operation, maintenance and service roles.

"Massachusetts is proud to work with our regional partners to produce these reports which provide vital information about the potential of the offshore wind industry," said MassCEC CEO Stephen Pike. "The Commonwealth has made a significant commitment to offshore wind, and a regional effort will be essential to developing a supply chain that will maximize job creation and other economic benefits in the northeast region."

While the analyses assumed that a cost premium would be paid in the early years for U.S. offshore wind, the results in the market characterization and jobs reports should be considered in the context of rapidly falling prices for offshore wind in Europe. This price trend reflects the well-established infrastructure and supply chain in Europe, as well as the movement to larger wind turbines. The states are exploring ways to capitalize on this trend for offshore wind in the Northeast.

The Regional Market Characterization was produced by a research team led by Sustainable Energy Advantage, LLC and including AWS Truepower, Daymark Energy Advisors, and Meister Consultants Group. The jobs study was carried out by BVG Associates, an international consultancy with extensive experience tracking the job impacts of the offshore wind industry in Europe. GustoMSC, an international leader in designing and engineering vessels and equipment for offshore applications, researched and wrote the vessel study.

An Advisory Committee representing a range of energy sector, economic, and environmental expertise reviewed and provided feedback on drafts of the reports.

The reports are available for download at www.northeastwindcenter.org/offshore-wind/multi-state.

Clean Energy States Alliance is hosting webinars on the reports. On November 20th (12pm EST), there will be a webinar on the multistate project as a whole and on the Regional Market Characterization (see www.northeastwindcenter.org/event/opportunities-barriers-shaping-offshore-wind-market-northeastern-u-s). On December 7th (12 pm EST), there will be a webinar on the jobs report. Details are available at www.northeastwindcenter.org/event/u-s-job-creation-offshore-wind.

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