

DIRECTION

THE FUTURE OF WIND



One of the initiative's projects will continue the deployment of a near real-time whale detection system to provide timely alerts on the presence of baleen whales such as the humpback. (Courtesy: Shutterstock)

US Wind to launch offshore wind research partnership to study effects on marine life

Baltimore-based US Wind, Inc. will partner with University of Maryland Center for Environmental Science (UMCES) for three research projects aimed at understanding the potential effects of offshore wind development on marine mammals, fish, and birds. US Wind pledged \$11 million in funding over 10 years, and the research will take place in US Wind's 80,000-acre federal lease area off the coast of Ocean City, Maryland.

"As US Wind works to develop offshore wind off Maryland's coast, it's imperative that we do so responsibly," said Jeff Grybowski, US Wind CEO. "We're thrilled to be partnering with UMCES on industry-leading environmental research that will enhance protections for marine life as we develop this clean energy resource for the region."

"Partnering with a leading environmental research institution like UMCES is an exciting building block in our efforts to collect much-needed biological information in our lease," said Laurie Jodziewicz, US Wind senior director of Environmental Affairs. "The planned work will go a long way in filling knowledge gaps that still exist about offshore wind's effects on the marine environment. We're excited to get started."

US Wind's funding will support three projects, all planned to kick off this year, to understand the potential environmental effects of offshore wind development in the Mid-Atlantic.

"We're really pleased with this continued partnership with US Wind on important questions related to the environmental impacts of offshore wind development," said University of Maryland Center for Environmental Science President Peter Goodwin. "We look forward to working with them along with state and federal agencies to help make the best decisions to minimize impacts to the environment."

The three UMCES research projects include:

► **Commercial and recreational fisheries monitoring:** An eight-year program to evaluate the extent that black sea bass change their aggregation behaviors before, during, and after construction. Black sea bass are structure-oriented with large aggregations occurring on artificial reefs and wrecks. Turbine foundations will add three-dimensional structure within US Wind's lease where very little exists. This research project will assess the benefits and potential fish aggregation effects. It will also test black sea bass fishing with ropeless gear, an important technology to reduce whale entanglements.

► **Near real-time whale detection:** This initiative will continue the deployment of a near real-time whale detection system to provide timely alerts on the presence of baleen whales (North Atlantic right whales, and humpback, fin, and sei whales) for a 12-month period from 2022 to 2023. The project is a partnership between UMCES and Woods Hole Oceanographic Institution that uses quiet mooring technology, whale vocalization detection algorithms, and telecommunications to transmit frequent alerts on the presence of baleen whales. The initiative enables real-time data collection through the buoy system that was initially funded by the Maryland Energy Administration and deployed by the Maryland Department of Natural Resources.

► **Passive acoustic monitoring array:** This long-term project will support passive acoustic monitoring to detect dolphins and large whales such as North Atlantic right whales to understand their presence and migration patterns in and around the lease area and the potential effects of construction. Working with Cornell University's Center for Conservation Bioacoustics, two types of listening devices will be deployed to determine the occurrence and position of large whales and dolphins, and to detect the tonal echolocation clicks of small cetaceans including porpoises.

Additionally, this project will deploy equipment to listen for passing fish, sharks, rays, and turtles that have been implanted with transponders for broader scientific research.

"The Department appreciates the coordinated research into safer equipment and marine wildlife monitoring," said Catherine McCall, director of the Maryland Department of Natural Resources Office of Ocean and Coastal Management. "The ongoing deployment of Maryland's whale monitoring buoy provides daily detections and helps resource managers protect sensitive species."

These UMCES-led research projects build on the environmental baseline work US Wind is doing to better understand the environment in and around its lease area and mitigate potential effects of offshore wind development on marine life and avian species. One such initiative includes aerial digital surveys to identify birds that may be displaced or avoid the wind farm once the turbines are installed. These research and monitoring programs also inform the comprehensive analyses the federal government must do to approve the construction and operation of offshore wind projects.

"The Maryland Energy Administration (MEA) is pleased that offshore wind developers are investing resources to support scientific understanding of the nexus between offshore wind development and the environment, wildlife, ecosystems, and habitats off the coast of Maryland," said Mary Beth Tung, Ph.D., Esq., Director of MEA. "US Wind's investment complements the research initiatives funded by MEA and administered by DNR, which total more than \$15 million and have been carried out since 2014."

Monitoring these populations is a critical step in conservation to measure changes, track threats, and evaluate the success of wildlife management. The projects were selected based on their efficacy and ability to

complement existing research efforts in the scientific community. All data will be made available to government and academic researchers, and reports and information will be made publicly available to help protect these important species and ecosystems for generations to come.

MORE INFO uswindinc.com

Swire Energy Wind names commercial team leader

Jan Harrestrup has been named Swire Energy Services wind division's Head of Commercial.

Harrestrup will be responsible for global business development, contract management and sales, in addition to procurement and the general management of SES Danish entity, Swire Energy Services A/S.

Harrestrup was head of sales at B&R Automation Denmark. His career includes commercial and business development roles across 16 years in the wind sector covering Europe, the United States, and Asia, including VP Business Development at DEIF Wind Power Technology.

"I am very proud to join Swire Energy Services at this key time in its development. I am enthused to join a fantastic team and support the vision to become the service partner of choice for the global wind industry," Harrestrup said.

Based in Denmark, Jan joins the senior management team for the Wind division and will report to Sabine Weth, vice president Offshore Wind.

"I am delighted to welcome Jan as Head of Commercial. It is an exciting time for our division as we look to further develop and expand our presence in the wind market, the appointment of Jan to this role is a key element in our pursuit of our ambitious strategy and future growth," Weth said.

Operating in 30 countries and employing more than 750, Swire Energy Services is an integrated service provider supporting the global energy



Jan Harrestrup has been named Swire Energy Services Wind's head of commercial. (Courtesy: Swire Energy Services)

industry. Swire Energy Services wind division provides end-to-end services designed to optimize the performance of onshore and offshore wind farms, and includes blade inspection and repair, wind turbine maintenance, and HV and electrical services.

MORE INFO swirees.com

Collegiate offshore wind competition set for May

The U.S. Department of Energy's Collegiate Wind Competition (CWC) will take place May 16-18, 2022, in conjunction with the American Clean Power

Twelve competing teams will represent their colleges and universities at the 2022 competition. (Courtesy: U.S. Department of Energy)

Association's CLEANPOWER 2022 Conference & Exhibition in San Antonio, Texas.

The competition helps prepare college students for jobs in the wind-energy industry through real-world experience with wind-energy technology, project development, finance, communications, and outreach.

The CWC teams will compete in three contests that support the theme of siting, outreach, and development challenges associated with fixed-bottom offshore wind energy projects:

► The Turbine Prototype Contest:

Teams design and build an offshore wind turbine prototype to test in an on-site wind tunnel and sea simulation tank.

► The Project Development Contest:

Teams develop a site plan and cost-of-energy analysis for a hypothetical offshore wind farm.

► The Connection Creation Contest:

Teams partner with wind-energy industry professionals, raise awareness of wind energy in their local communities, and work with local media to promote their accomplishments.

"The signs point to a thriving future for offshore wind energy," said Elise DeGeorge, a competition manager at the National Renewable Energy Laboratory. "As students confront the challeng-

es of the 2022 CWC, they will develop the skills they will need to seize those opportunities and succeed in this growing industry.”

Twelve competing teams will represent their colleges and universities at the 2022 competition. Pennsylvania State University will defend its 2021 overall first place and Project Development Contest wins, while Kansas State University and Virginia Tech University will defend their respective Turbine Prototype Contest and Connection Creation Contest wins.

In addition to the 12 competitive teams, four teams will participate as “learn-along” teams, meaning they are not eligible for awards but may submit the same deliverables and receive feedback on submitted projects from competition judges.

MORE INFO www.energy.gov/eere/articles/2022-collegiate-wind-competition-teams-plug-offshore-wind-energys-electrifying

Energy agency: Clean energy spending up 50%

Clean energy spending earmarked by governments in response to the COVID-19 crisis has risen by 50 percent over the past five months and now stands at more than \$710 billion worldwide, though there are imbalances between regions, according to the latest update of the International Energy Agency’s Sustainable Recovery Tracker.

This unprecedented amount of enacted spending is more than 40 percent larger than the global green spending contained in the stimulus packages that governments enacted following the global financial crisis in 2008.

Advanced economies account for the bulk of this effort, with more than \$370 billion intended to be spent prior to the end of 2023, a level of short-term government spending that would help keep the door open for the IEA’s global pathway to net zero emissions by 2050.

Across emerging and developing economies, however, the total amount

of fiscal resources being dedicated to sustainable recovery measures is one-tenth of the amount in advanced economies, reflecting their very different financial and economic circumstances. In emerging and developing economies, about \$52 billion of sustainable recovery spending is planned by the end of 2023, short of what is needed in a pathway toward the 2050 zero-emission goal. The gap is unlikely to narrow in the near term, as governments with already limited fiscal means now face the challenge of maintaining food and fuel affordability for their citizens amid the surge in commodity prices following Russia’s invasion of Ukraine.

“Countries where clean energy is at the heart of recovery plans are keeping alive the possibility of reaching net zero emissions by 2050, but challenging financial and economic conditions have undermined public resources in much of the rest of the world,” said Fatih Birol, the IEA Executive Director. “International cooperation will

be essential to change these clean energy investment trends, especially in emerging and developing economies where the need is greatest.”

Even in advanced economies, some of the earmarked funds risk not reaching the market within their envisaged timelines. Delays in setting up government programs, ongoing supply chain disruptions, labor shortages, and financial uncertainty have clogged project pipelines.

In addition, consumer-facing measures — such as incentives for building retrofits and electric vehicles — are struggling to reach a wider audience because of issues including red tape and lack of information. “Governments who can remove red tape and quickly set up effective programs will be the ones to reap the benefits and position themselves in the new global energy economy that is emerging,” Birol said. ↵

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