

Change is in the wind

May 16, 2022



Perspectives and complexities of responsible wind energy generation off the Oregon Coast was the topic of Oregon's State University's Science Pub meeting Monday, May 9.

Flaxen Conway, director of OSU's marine resource management graduate program and an Oregon Sea Grant Extension specialist, presented the issue. In her roles at OSU, she works with coastal communities, families and other groups. She works with multiple partners to provide coastal and statewide outreach and engagement.

"My work focuses on collaborative learning," Conway said. "How to build connections, how to build solutions together, how to build resilience."

Conway said this talk is just an introduction to renewable energy. All the renewable energy solutions have their positives and negatives. Renewable energy continues to evolve.

"Energy, the ocean and offshore wind can look different depending on one's perspective," Conway said. "There's lots of viewpoints."

Marine renewable energy is just one solution. We need as many potential solutions as possible, Conway added. Research shows there is no one silver bullet.

"Finding lasting solutions also takes creativity, it takes imagination, it takes careful consideration, recognizing what other challenges exist," Conway said.

Wind energy began at OSU and in Oregon in the early 2000s with a lot of research. There was some outreach and engagement during this decade.

“This decade was kind of viewed as the first marine renewable energy gold rush,” Conway said. “In the 2010s, we had more research and development going on. We have a lot more collaborations happening.”

In the 2010s, there was also the Pacific Marine Energy Center. There was 20 years of working collaboratively with many partners.

“PacWave’s kind of a big deal,” Conway said. “PacWave North has an autonomous device testing.”

PacWave South is the newest thing to come on board. It is the development of a test facility in Newport for wave energy technology.

“This was created collaboratively with stakeholders like the commercial fishing community and local decision makers,” Conway said of PacWave. “It was a very thoughtful process.”

Conway said there is a push for offshore wind energy in Oregon and the U.S., as it has the potential to combat the climate crisis. It began in 2014 when it was first proposed by Principle Power. There is currently no offshore wind energy in Oregon.

The ocean is a public space and has state and federal managed uses, Conway added. The ocean is a place with lots of connections. There are current uses and they overlap.

“Fishermen use the entire ocean, not just portions of it,” Conway said.

Ocean stakeholders/space users include fisheries, fiber optic cables, recreational ocean users, scientists, environmental groups, economic development groups, tribal nations, military, hazard response, the marine renewable energy industry and more.

Conway said offshore wind is relatively new compared to onshore wind or solar energy.

“The size of the machine is something to be aware of,” Conway said.

The turbines are 1,000 feet tall, about the size of the Eiffel Tower.

Conway said the type of offshore wind technology depends on the place. The Bureau of Ocean Energy Management (BOEM) plans to lease sufficient power generation capacity for 3 GW capacity.

Another complexity is the environmental complexity, Conway added. Collisions could happen with birds above water and with whales below the water. Noise is another potential environmental impact.

A BOEM-funded literature review recently assessed that many of the environmental effects from floating offshore wind would be minimal or moderate.

Updates on offshore wind energy can be found at <https://www.boem.gov/renewable-energy/state-activities>