Offshore Wind Energy and Communities:
Perspectives on Local Impacts

Matilda Kreider and Suzanne MacDonald

Photo by Dennis Schroeder, NREL 40395

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- Webinar will be recorded and posted to the National Renewable Energy Laboratory (NREL) YouTube channel and the Department of Energy's WINDExchange website (WINDExchange.energy.gov)

- Pose questions using the Q&A function during and at the end of the presentation.
  - Questions will be answered either during or after the webinar.

What Will We Cover?

- Introduction to offshore wind energy
- Overview of communities impacted by offshore wind
- Discussion of community impacts between panelists.

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Introduction to Offshore Wind Energy

Biden Administration Offshore Wind Energy Goals

Photo by Dennis Schroeder, NREL 40484

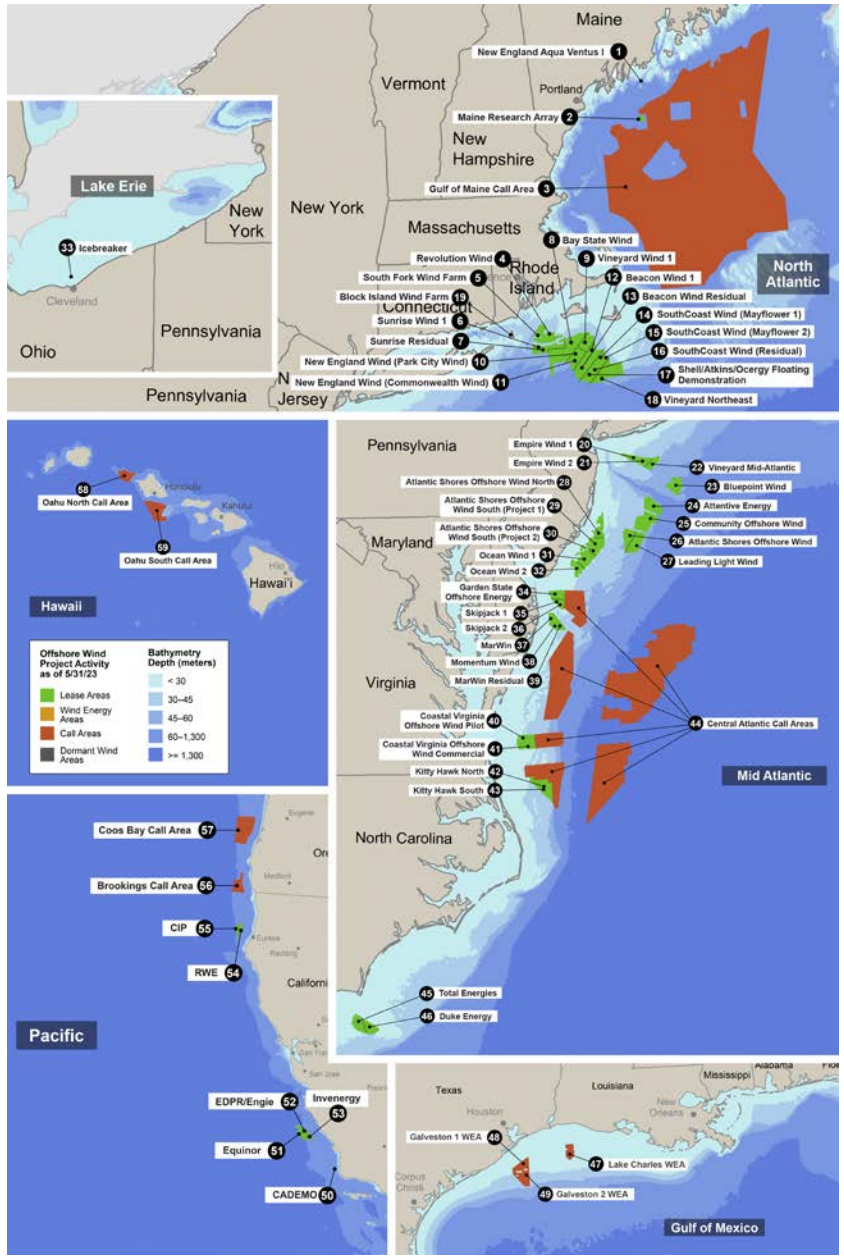
- In March 2021, the Biden administration set a national target of installing **30 gigawatts of offshore wind energy by 2030.**[1]
- The steps identified to support this target include:
  - Advancing U.S. wind energy projects to create well-paying, unionized jobs
  - Investing in American infrastructure to strengthen the domestic supply chain
  - Supporting critical research and development and data sharing.[1]
- The offshore wind energy capacity in the project pipeline is sufficient to reach 30 gigawatts by 2030.[2]

[1] The White House. 2021. "FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs." March 29, 2021. https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/.

[2] Shields, M., et al. 2022. *The Demand for a Domestic Offshore Wind Energy Supply Chain.* Golden, CO: National Renewable Energy Laboratory. NREL/TP-5000-81602. https://www.nrel.gov/docs/fy22osti/81602.pdf.

U.S. Planned Projects

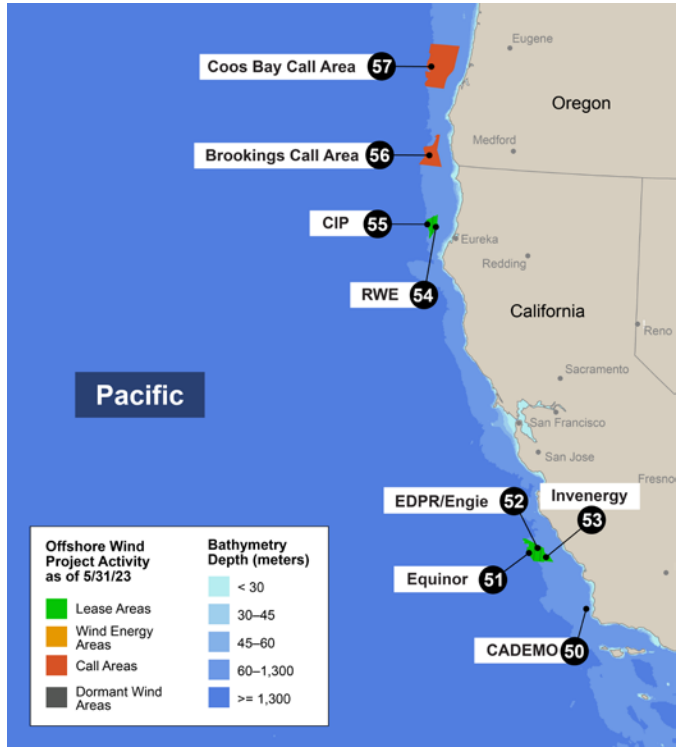
- Offshore wind energy planning and development activities are ongoing in the Atlantic, Pacific, Gulf of Mexico, and Great Lakes regions.
- As of June 2023, there are 42 megawatts (MW) of operational offshore wind energy projects in the United States.
- On the Atlantic coast, 21 new offshore wind energy projects are expected to be constructed by early 2028.
    - The Vineyard Wind 1 (800 MW) and South Fork Wind (130 MW) projects are currently under construction and are expected to be fully constructed by the end of 2023.

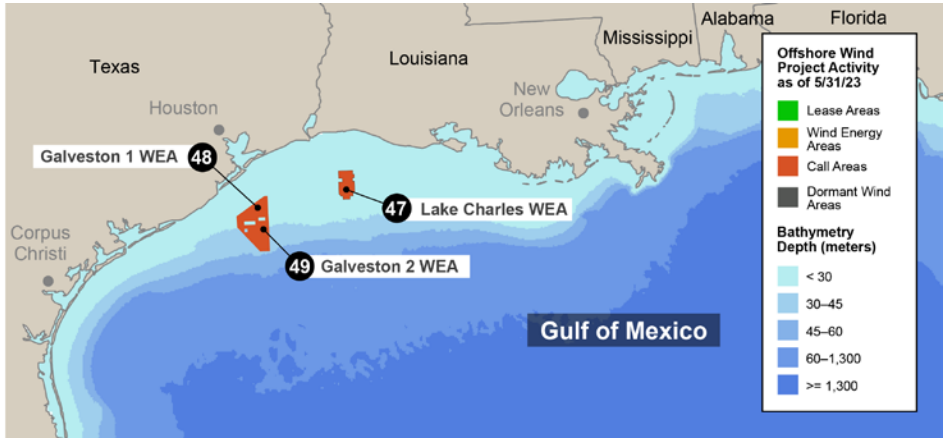


The graphic represents projects through May 2023. Image created by John Frenzl, NREL

U.S. Planned Projects (cont.)

- The Bureau of Ocean Energy Management (BOEM) held its first offshore wind energy lease auction for areas off the coast of California in December 2022.
- In early 2023, BOEM announced plans to hold its first lease auction for offshore wind energy development in the Gulf of Mexico.





These graphics represent projects through May 2023. Images created by John Frenzl, NREL

Offshore Wind Energy and Communities

Offshore Wind Energy and Communities

- Most utility-scale offshore wind energy projects are sited in federal waters at a significant distance from the mainland, but they still have a footprint onshore.
- The definition of “impacted communities” can vary depending on factors like project size, location, and type of impact.
- Understanding how a community is defined and how it is impacted is an important first step for community members, developers, governments, and other stakeholders.
- Impacts may be positive, negative, or neutral.

A group stands on the Block Island beach where cables from the Block Island Wind Farm come onshore. *Photo by Dennis Schroeder, NREL 40399*

Types of Impacted Communities

Some examples of communities that may be impacted by offshore wind energy include:

People working in industries that may be impacted
(i.e., fishing, tourism, manufacturing)

People with shared heritage
(i.e., tribal communities)

Localities defined as “host communities” by developers
(i.e., in a host community agreement)

Photo by Brent Rice, NREL 52796

Communities near offshore wind ports or manufacturing facilities

Communities near cable landing sites or other grid infrastructure

Island or coastal communities living close to offshore wind energy projects

What Kinds of Local Impacts Can Offshore Wind Energy Have?

- Economic and workforce
  - Local job creation and workforce development
  - Supply chain activities (e.g., manufacturing, construction)
  - Ocean co-use (e.g., tourism, fishing)
  - Community benefit agreements, property taxes, and other revenues
- Environmental
  - Impacts to marine environment from vessels, construction, and operations
  - Impacts to local air quality from manufacturing activities, vessels, and reduced use of fossil fuel energy sources to produce electricity.

Photo by Brent Rice, NREL 52802

What Kinds of Local Impacts Can Offshore Wind Energy Have? (cont.)

Photo by Gary Norton, U.S. Department of Energy 41180

- Onshore infrastructure
  - Creation or modification of ports and other supply chain facilities
  - Development of grid infrastructure like cable landings and substations
- Visual
  - Changes to views from shore or from boats near project site
- Cultural
  - Impacts to landscapes and resources of cultural, historical, and/or tribal significance
  - Changes to historical ocean uses, land uses, and economic activities
  - Influx of new businesses, residents, tax revenues, investment, tourism, and other changes into the community.

Addressing Negative Impacts

- When negative impacts have been identified, a variety of approaches can be taken by developers, governments, and other actors to address them, such as:

Avoid	Minimize	Mitigate	Compensate

- State and federal agencies have different processes for evaluating and addressing impacts
  - For example, BOEM evaluates environmental and economic impacts as part of its offshore wind energy leasing process
- Efforts to address impacts can take place on different levels
  - Example of a regional effort:
    - Eleven states on the East Coast are collaborating to establish a regional fund to compensate the fishing industry for negative impacts from offshore wind energy
  - Example of a local effort:
    - For the South Brooklyn Marine Terminal project in New York City, a community benefit agreement requires that the new port facility must be zero emission.

Community Impacts Panel

Panelist Bios

Dr. Alison Bates is an assistant professor of Environmental Studies at Colby College. Dr. Bates researches social acceptance of renewable energy systems and implements an equity and justice framework to inform decision-making in the energy transition. She has worked on national energy policy with U.S. Senator Coons to develop markets and policies for renewable energy infrastructure along the coast and served in an advisory role with energy markets planning in Maine with state agencies, nongovernmental organizations, and industry. She earned her Ph.D. in marine policy at the University of Delaware Center for Carbon-free Power Integration and has many years of experience in the nonprofit sector for environmental education and public land conservation.

Panelist Bios

Benjamin Gallinelli is Vice President of the Southern New Jersey Development Council (SNJDC), a nonprofit organization charged with promoting responsible economic growth for the southern eight counties of New Jersey. Ben directs SNJDC's communications, outreach, and advocacy activities that impact the business community and advance economic development in the South Jersey region. Ben is also the Project Director for SNJDC's Diversity, Inclusion and Local Engagement efforts on behalf of Construction Manager AECOM Tishman for the NJ Wind Port Project in Lower Alloways Creek, Salem County.

Panelist Bios

Jacob Miller is a Vineyard Offshore Tribal Liaison. He works to build and maintain collaborative relationships with tribal governments and members of tribal nations. Jacob most recently worked as a Senior Policy Advisor and Community Development Director in the office of Massachusetts State Senator Mark Montigny. He has worked as a union organizer with the Greater Southeastern Massachusetts Labor Council AFL-CIO and a grassroots coordinator with Opportunity Nation. Jacob holds a bachelor's in Political Science and English from the University of Massachusetts Dartmouth, a master's in management from the University of Cambridge, and a master's in Building and Urban Design in Development from the University College London. He is currently completing his Juris Doctor degree at UMass Law.

Moderator Bio

Suzanne MacDonald is a Senior Researcher at NREL where she supports stakeholder engagement initiatives in offshore and land-based wind, as well as other community-led energy transition programs. She has nearly 20 years of experience supporting communities to navigate complex change, most recently at the Maine-based Island Institute. Suzanne has been working alongside communities on offshore wind since 2009, supporting benefit negotiations, facilitating communities of practice, developing case studies, and integrating equity into state and national initiatives. She holds degrees in policy and international and urban community development. Suzanne lives with her family in a fishing community in Midcoast Maine.

Community Impacts Panel

- Pose questions using Zoom's Q&A function.
  - Questions will be answered either during or after the webinar.

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Thank You

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