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REACHING NET ZERO TOGETHER:

ENERGY TRANSITION CHALLENGES AND OPPORTUNITIES

The Winds of Change

Presenters



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Agenda

- Market Overview
- Regulatory Issues and Developments
 - OCS Renewable Energy Authorization Process
 - Energy Regulatory
- Project Finance for Offshore Wind



Market Overview

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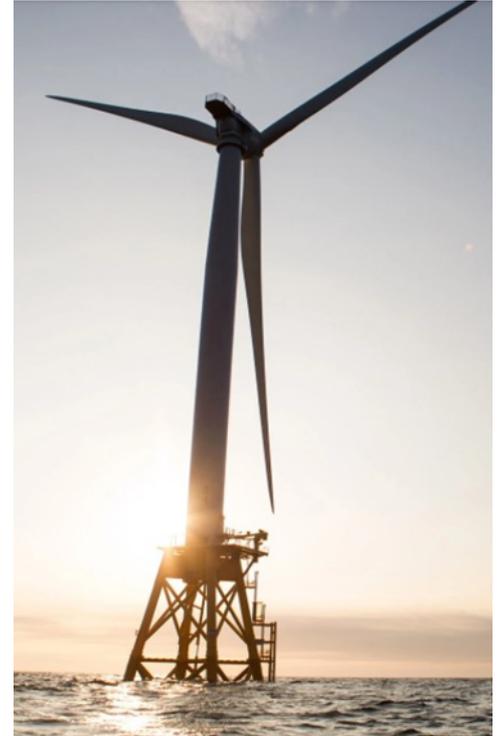
Plotting the Course – State Offshore Wind Goals

- Several coastal states have set ambitious targets for offshore wind projects
- Goals established through a mix of Executive Orders and Legislation
- Every state from Massachusetts to Virginia (except Delaware) has at least one offshore wind project that has been approved to receive Offshore Wind Renewable Energy Credits (ORECs) or has a Power Purchase Agreement in place
- Several states are also seeking to develop port and manufacturing capabilities to support offshore wind development, and Jones Act compliant vessels are being planned or built

State	Goal	Target Year
Connecticut	2,000 MW	2030
Massachusetts	5,600 MW	2027
Maryland	1,200 MW	2030
New Jersey	7,500 MW	2035
New York	9,000 MW	2035
North Carolina	8,000 MW	2040
Oregon	3,000 MW	2030
Virginia	5,200 MW	2035
Total	41,500 MW	

Make Sail! Recent Market Developments

- On March 26, Massachusetts increased its offshore wind target by 2,400 MW to a total of 5,600 MW
- On March 29, President Biden established a goal to deploy 30 GW of offshore wind by 2030
- On May 10, the Bureau of Ocean Energy Management (BOEM) issued the Record of Decision (ROD) for Vineyard Wind's Construction and Operations Plan
- On May 25, 2021, the Department of the Interior and Department of Defense announced an agreement to advance areas off the California coast for offshore wind development



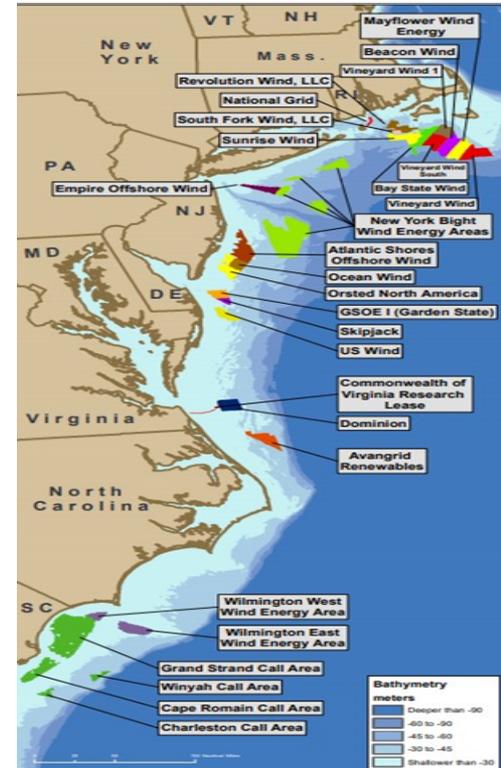
Block Island Turbine
Source: [N.Y. Times](#)

Making Way - East Coast Projects Moving Forward

- BOEM has issued a Notice of Intent to prepare an EIS for the following:
 - March 29 – Ocean Wind (NJ)
 - April 30 – Revolution Wind (RI) (reissued June 11)
 - June 24 – Empire Wind (NY)
 - June 30 – Vineyard Wind South (MA)
 - July 2 – Coastal Virginia Offshore Wind (VA)
 - July 30 – Kitty Hawk Offshore Wind (NC)
- The Administration plans to issue NOIs on up to 10 projects this year
- Dominion announced the building of the first Jones Act compliant installation vessel

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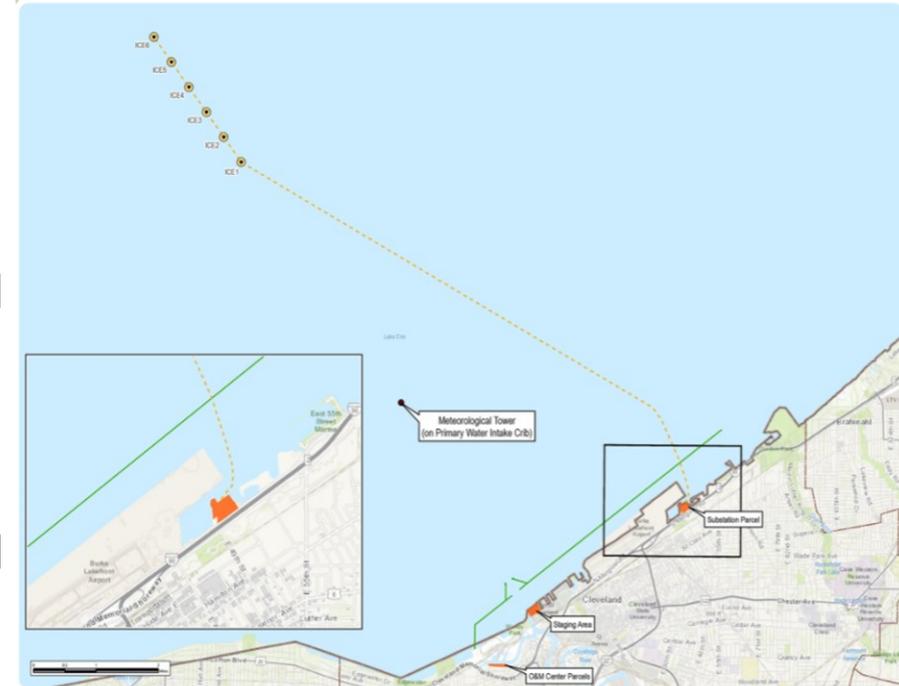
Offshore Wind Leases



Source: BOEM

Offshore Wind - Great Lakes Region

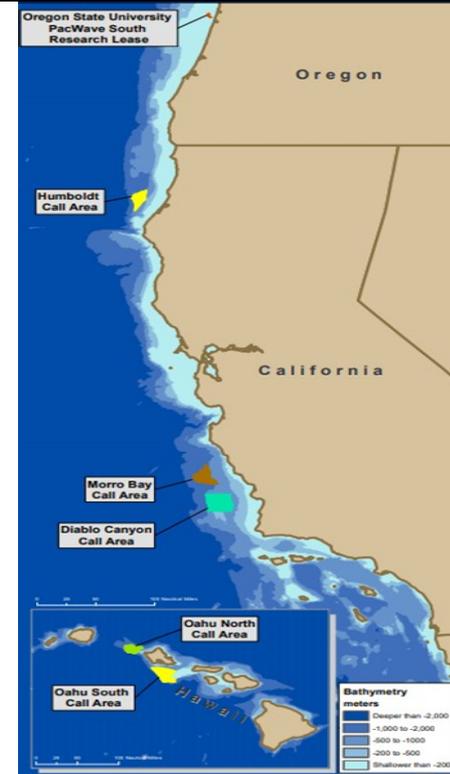
- One pilot project: Icebreaker Wind
- Six turbine 20.7 MW project
- Located 8 miles north of Cleveland, Ohio in Lake Erie
- Project received a Certificate of Environmental Compatibility and Public Need in October 2020
- Completed PJM Interconnection queue process
- Must still obtain approval for its wildlife monitoring plan and win one pending appeal
- Construction planned for summer 2022 but is uncertain



Source: LEEDCo

Offshore Wind – Pacific Coast

- No active leases. In September 2018, BOEM determined that a floating offshore wind pilot project no longer retained its noncompetitive interest status, and BOEM stopped processing the lease request.
- BOEM has designated five call areas: three off the coast of California and two in Hawaii.
- BOEM plans to offer a lease for the Morro Bay call and Humboldt call areas in early 2022; focus will be on floating offshore wind platforms.
- Alpha Wind Energy submitted two unsolicited applications for leases to BOEM – the two projects would each have 50 floating turbines 15 miles or more from the Hawaiian coast.



Offshore Wind Market Opportunities in California: Driven by CPUC IRP Proceeding

- California Public Utilities Commission (CPUC) Integrated Resource Planning (IRP) Proceeding
 - Biannual proceeding focused on ensuring that Load Serving Entities (LSEs) have balanced portfolios that will provide reliability and meet CA GHG reduction targets
 - Just completing current two-year cycle with 8/17/21 Proposed Decision seeking comment on proposed Preferred System Plan (PSP) for 10-year planning horizon
 - Proposed decision comes after LSEs' submission of proposed IRPs and concludes that LSEs' plans submitted in September 2020 expected to fall short of meeting GHG and reliability targets due to a collective insufficiency of planned new capacity
 - Comments from parties due September 27, 2021

Proposed Decision in IRP Is Bullish on Offshore Wind

- PD notes Biden Administration actions and current CAISO study to evaluate transmission needs and costs to interconnect 8,000 MW of offshore wind at locations in Humboldt, Diablo Canyon and Morro Bay
 - Study results due in November and used in next IRP cycle
 - Amount of transmission currently available should suffice for immediate development
 - PD specifically notes intention to make use of existing transmission delivery of 5 to 6 GW of offshore wind connecting in the area of Diablo Canyon that is retiring by end of 2025
- CPUC has specifically included in its base case to CAISO an amount of offshore wind to include in its 2022-23 Transmission Planning Process (TPP)
 - This step lays the groundwork for transmission development to support the resource
- This is an area where comments from parties will be very important

CPUC IRP Proceeding Creates Opportunities / Poses Challenges

- Modelling done by CPUC contemplates by 2030 substantial amounts of new in-state (land-based) wind by 2030 (>3500 MW), significant out-of-state wind (1500 MW) but virtually no offshore wind (195 MW).
- By 2032, substantial amount of offshore wind forecast (>1700 MW), which is likely driven by development time required.
- These figures are large but are dwarfed by new storage (>14,750 MW) and new solar (>18,880 MW).
- Still strong market signal to LSEs to contract for offshore wind; LSEs can deviate from PDP, but need to justify such deviation.
- Strong nudge by legislative passage and likely signature into law of AB 525: Requires Energy Commission report by June 1, 2022 to evaluate and quantify “maximum feasible capacity of offshore wind . . . and to meet offshore wind planning goals by 2030 and 2045.”
- Challenge will be to meet in-service dates by 2032, given permitting and developing challenges associated with floating wind-generation platforms.



Regulatory Issues and Developments

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Outer Continental Shelf Renewable Energy Authorization Process

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Permitting for Offshore Wind Projects on the Outer Continental Shelf – Federal Regulatory Regimes

- Energy Policy Act of 2005 (BOEM) – authorizes BOEM to issue leases, easements, and ROW for renewable energy on the OCS
- National Environmental Policy Act (BOEM)
- Coastal Zone Management Act and Role of States
- Other Statutes of Note
 - Marine Mammal Protection Act (NMFS)
 - Federal Endangered Species Act (NMFS/USFWS)
 - National Historic Preservation Act (BOEM-SHPO)
 - Clean Water Act and Rivers and Harbors Act (Corps)

BOEM Renewable Leasing Process

Four Distinct Phases:

- Planning and Analysis
- Leasing
- Site Assessment
- Construction and Operation

Planning and Analysis

- Call for Information and Nominations (Call)
- Area Identification
- NEPA Review

Leasing

- Proposed Sale Notification (PSN)
- Bidder Qualification
- NEPA
- Final Sale Notification (FSN)
- Auction
- Lease(s)

Site Assessment

- Site Characterization
 - Geophysical Surveys
 - Geological Surveys
 - Biological Surveys, etc.
- Site Assessment Plan (SAP)
- NEPA

Construction and Operation

- Construction Operation Plan (COP)
- Facility Design Report (FDR)
- Fabrication and Installation Report (FIR)
- Decommissioning Plan

NEPA Review

- Major Federal Actions/Decision Points
 - Auction/Lease Issuance
 - SAP/COP Approval
 - Decommissioning
- BOEM NEPA Process
 - Scoping
 - Notice of Availability
 - Environmental Assessment
 - Public Comment Period
 - Finding of No Significant Impact or EIS
 - Comment Period if EIS
 - Final EIS

Activities Considered – Lease Issuance/SAP

- Activities Considered – Lease Issuance/SAP
 - Vessel Traffic
 - Noise
 - Bottom Disturbance
 - Air Emissions and Pollutant Discharge
 - Lighting
 - Aesthetics/Visual
- Resources Considered in EIS – Environmental and Socioeconomic
 - Physical
 - Biological
 - Socioeconomic

Other Federal Agencies Involvement

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- U.S. Coast Guard
- Department of Defense
- EPA
- Advisory Counsel on Historic Preservation/State Historic Preservation Officer

State/Local Permitting Process

- State Waters
- Transmission Issues and Permitting
- Port Upgrades
- Potential for Regional Solution – NJ Solicitation

Energy Regulatory

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FERC-Jurisdictional Actions to Speed Offshore Wind Development

- PJM “State Agreement Approach” to transmission project development; unique under FERC’s Order 1000
 - Project is selected by the state to fill state policy objectives (“public policy” projects)
 - Project costs are allocated entirely to utilities in that state
- New Jersey RFP to Support State Agreement Approach for Offshore Wind Transmission
 - PJM analyzes submissions and makes recommendations to NJ BPU
 - Ultimate decision by NJ BPU
 - Potential options include:
 1. “upgrades to the existing grid to facilitate the offshore wind energy injections”
 2. “extension of the onshore transmission grid closer to offshore wind locations”
 3. “optimal landfall approaches to reduce environmental impacts, and any necessary offshore substations”
 4. “interconnections between offshore substations, sometimes called a transmission backbone, to provide benefits of a networked offshore grid”

FERC Advance NOPR on Transmission Planning and Interconnection Issues

- *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, 176 FERC ¶ 61,024 (July 15, 2021)
- FERC seeks comment on the potential need for reform of Commission regulations necessary to improve regional transmission planning and cost allocation and generator interconnection processes
 - Commission noted trend of siting renewables further from load and the impact on the interconnection process and transmission planning

FERC ANOPR Proposal: Funding Interconnection-Related Network Upgrades

- Under Order No. 2003, while generally an interconnection customer may be required to initially fund the full cost of network upgrades, non-independent transmission providers must credit the interconnection customer against transmission delivery service.
 - This process assumed that network upgrades benefit the entire network.
- Participant funding - costs assigned directly to the interconnection customer, transmission service credits are not awarded, and interconnection customers may receive capacity rights created by the interconnection-related network upgrades
 - RTOs/ISOs have adopted their own variations of this approach.
- FERC to consider:
 - Are participant funding costs increasing?
 - Does approach unjustly neglect the benefits provided to other customers for network upgrades and/or lead to a “free rider” problem?

FERC ANOPR Proposal: Coordinating Generator Interconnection Processes

- Most common existing practice is that new interconnection customers pay for costs to construct large, high-voltage transmission facilities
- Regional transmission planning processes and generator interconnection processes tend to work independently
 - FERC suggests this construct may result in inefficient investment in transmission infrastructure and unjust and unreasonable or unduly discriminatory or preferential rates
- FERC is considering the need for coordination between regional transmission planning and generator interconnection processes
 - Some limited coordination exists today, such as between PJM and MISO for interconnection studies
- FERC sees a gap with no process to jointly assess benefits and allocate costs of transmission facilities that provide benefits to both system loads and new generation



Project Finance for Offshore Wind

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Market Players

- Owners / Operators
- Investors
- Lenders
- Transmission Owners
- Essential Supporting Roles
 - Suppliers; construction and installation; ship building; onshore support (ports, O&M, transport, etc.)
- Government
 - Federal: federal incentives
 - States: cash and tax incentives; revenue streams



Financing Offshore Wind

- Consider Differences from Onshore Wind
- Tax Equity
 - ITC and recent developments
- Debt
 - Construction / Bridge / Term
 - DOE Loan Program
 - Export Credit Agencies
- JVs and Other Financing Options

Challenges

- Massive project costs
- Longer construction period
- Uncharted waters





Questions

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Biography



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Ella Foley Gannon represents clients before a myriad of state and federal regulatory agencies, focusing her practice on federal and state environmental laws, natural resource permitting, and land use entitlements. Recognized as one of the leading permitting and siting lawyers in California and an authority in endangered species, wetland, water quality, and water rights issues, she assists developers and landowners who undertake complex development projects, including renewable and traditional energy and transmission projects, as well as residential, commercial, industrial, and mixed-use projects. Ella currently serves as a deputy chair of Morgan Lewis's global litigation practice.

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Since 2003, William (Bill) D. Kissinger has focused his practice on energy matters in California and nationally along with related environmental issues. He developed this practice after spending two years working as senior deputy legal affairs secretary to Gov. Gray Davis and serving as the primary legal contact for the Office of the Governor with Cal EPA, Cal Health and Human Services Agency, and the Resources Agency. Bill previously spent four years in Washington, DC working in senior positions at the White House and the US State Department.

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Laura Neumeister Wright focuses her practice on project finance and development of renewable energy generation projects. She advises sponsors and financing sources, including developers, private equity and financial institutions, in the acquisition/sale, development, construction, operation, and financing of wind, solar and other renewable assets. Laura is admitted in California and New York only, and her practice is supervised by Illinois Bar members.

Biography



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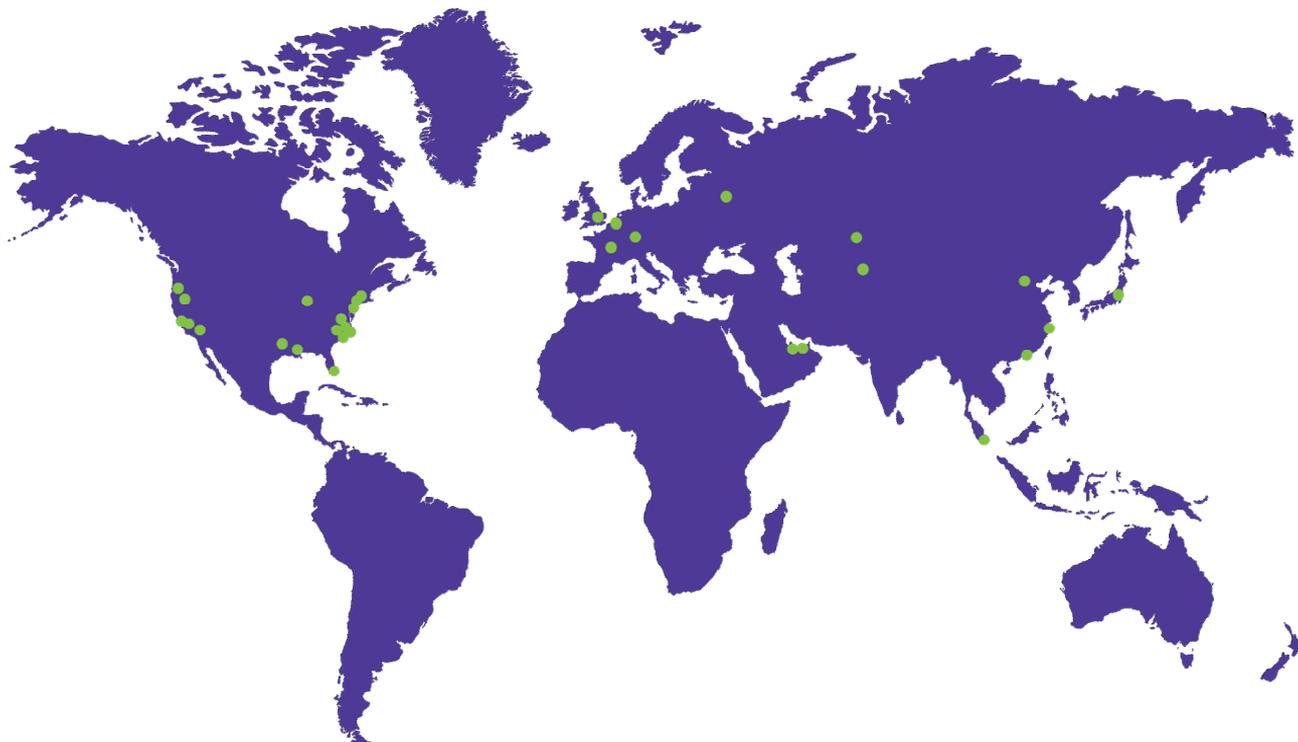
J. Daniel Skees represents electric utilities before the Federal Energy Regulatory Commission (FERC) and other agencies on rate, regulatory, and transaction matters. He handles rate and tariff proceedings, electric utility and holding company transactions, utility financing, electric markets and trading issues, reliability standards development and compliance, including cybersecurity requirements, administrative litigation, and transmission development. In handling appeals of FERC decisions, Dan has successfully represented clients before both the US Court of Appeals for the District of Columbia Circuit and the US Court of Appeals for the Fifth Circuit.

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