



Solutions for Offshore Wind Development

October 2023

AECOM Delivering a
better world

ABOUT AECOM

AECOM maintains a rich history in offshore wind (OSW) development and marine-based planning, design, engineering, and construction for worldwide offshore facilities and associated onshore infrastructure.

AECOM's team fully understands the intricacies of planning and implementing large-scale infrastructure projects. This understanding enables us to integrate seamlessly with the diverse work groups or consultants necessary to develop successful projects. We consistently deliver work packages that synchronize with other activities being advanced, thereby reducing timelines and adding efficiency. Our technical expertise reaches

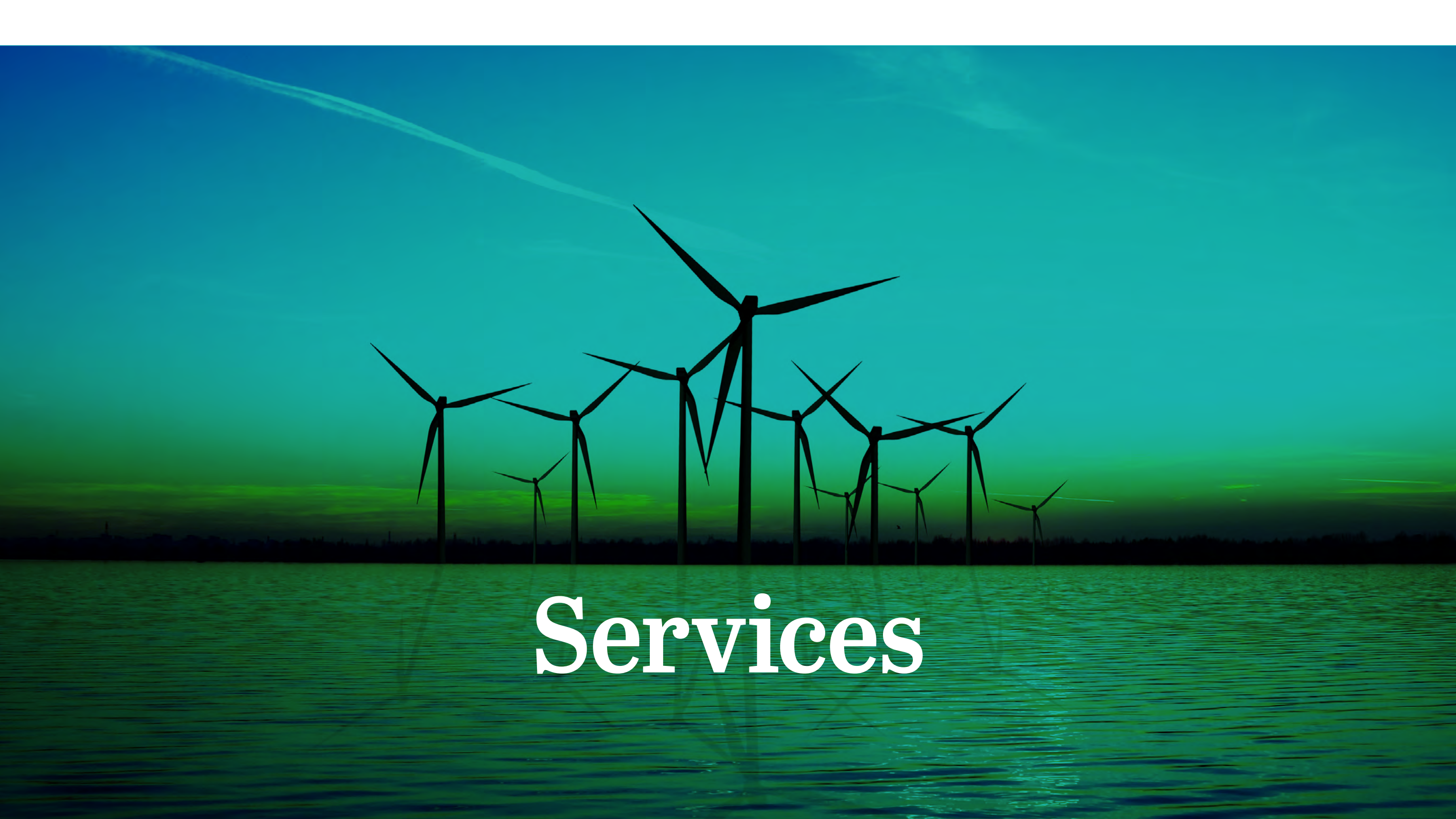
from concept to decommissioning, including site assessment, stakeholder engagement, permitting and consents, electrical, civil/geotechnical, and structural design, ports and marine and program management.

AECOM is currently the major consultant providing technical Environmental and Engineering support to four major offshore wind development projects located off the northeast U.S. Coast. Our work supports the successful implementation of energy projects through turnkey permitting, development, and engineering of more than 30,000 megawatts of wind energy.

AECOM offers a single source for offshore wind development worldwide. Our scientists, engineers and specialists provide global consulting expertise from concept to construction, so you're always supported in your decision making and how to manage potential risks.

KEY AECOM ATTRIBUTES

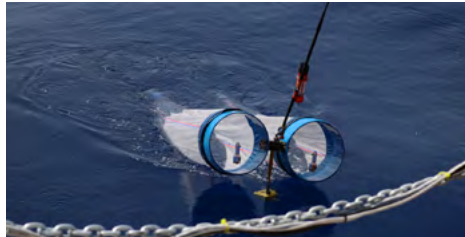
- Ability to support OSW development from concept to construction
- Access to full service environmental and engineering capabilities through global/nationwide network
- Local experience with national subject matter expertise



Services

SERVICES

STUDIES & SURVEYS



- Sediment sampling & physical, chemical, & biological analysis
- Remotely Operated Vehicle (ROV) video survey & analysis
- Sediment Profile Imaging (SPI)
- Physical oceanography, hydrography, & geophysical surveys
- Water quality & conductivity, temperature, & depth (CTD)
- Marine ecology/biology
- Air & visual impact assessments
- Marine (metacocean, fisheries, benthic/biological, chemistry)
- Submerged aquatic vegetation mapping
- Avian/bat studies
- Visual assessments/viewshed analysis
- Wetland delineations
- Threatened & Endangered (T&E) species surveys
- Cultural resources surveys
- Noise/acoustics studies
- Sediment sampling & transport

ENVIRONMENTAL PERMITTING & SOCIAL IMPACT ASSESSMENT



- Site Assessment Plans (SAP)
- Construction Operation Plans (COP)
- Offshore & coastal Environmental Impact Assessments (EIA)
- Social impact assessments (SIAs)
- Stakeholder engagement
- Oil Spill Response Plans (OSRPs)
- Coastal Zone Management (CZM) plans
- Federal Aviation Administration (FAA) Permit
- US Army Corps of Engineers (USACE) Section 10/404 Permitting
- US Fish & Wildlife Service (USFWS) Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA) & Marine Mammal Protection Act (MMPA) experience
- National Oceanic & Atmospheric Administration (NOAA) & National Marine Fisheries Service (NMFS) Fisheries Protected Species (ESA, MMPA) & Essential Fish Habitat (EFH), National Marine Sanctuary (MNS)
- State Section 401 Water Quality Certification (WQC)
- Federal Energy Regulatory Commission (FERC)
- US Coast Guard (USCG) permits
- US Environmental Protection Act (USEPA) Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits
- Section Federal National Historic Preservation Act (NHPA) & State Historic Preservation Office (SHPO) (Section 106)

SUBMARINE & LAND CABLES AC & HVDC



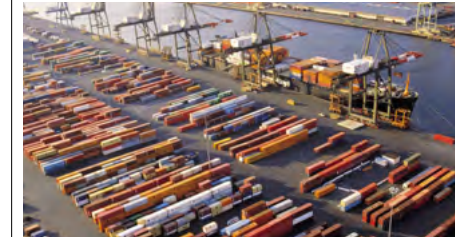
- Engineering & due diligence services at land based points of interconnection
- Optimization & constraints analysis submarine cable routing
- Environmental permitting & assessment & engineering design
- Cable design - type & rating selection
- Subsea geological & constraints mapping/survey
- Cable technical specification development
- Undersea cable routing design support
- Cable onshore landing protection & design

ONSHORE INTERCONNECTIONS



- Direct applied experience in electric transmission, distribution, & substation projects (new construction & maintenance)
- Marine, overhead, & underground installations
- Refurbishment & reconductoring
- Substation construction & expansion
- Substation design, engineering, & automation
- Routing & feasibility studies
- Utility corridor siting & selection criteria
- Route reconnaissance & quantitative assessments
- Construction monitoring
- Horizontal directional drilling (HDD) design
- Power systems analysis
- Supervisory Control and Data Acquisition (SCADA) Systems
- Detailed third-party engineering reviews

PORTS & HARBORS – FULL SERVICE MARINE ENGINEERING



- Planning
- Economic evaluations
- Coastal & marine engineering
- Civil & structural design
- Modelling & dynamic simulation
- Maritime security
- Marine architecture
- Program & construction management
- Coordination with NOAA, USACE, USFWS, & various agencies
- State & regional environmental agencies & port authorities
- Cold ironing/shore power engineering

HEAVY CIVIL CONSTRUCTION



- Constructability reviews
- Marine construction
- Pier structures
- Port facilities
- Specialty foundations
- Earthwork
- Electrical & mechanical
- Structural steel & concrete



Given the large number of projects that AECOM plans and designs each year, our staff is sensitive to the design process and is acutely aware of optimal approaches for coordinating designs with regulatory requirements. This high-level strategizing leads the team down the path to a cost-effective, constructible, and compliant engineering solution.

Areas of Expertise

- Site Assessment Plans (SAP)
- Construction and Operations Plan (COP)
- Subsea Marine Cable Routing Analysis
- Onshore Environmental Impact Assessments
- Social Impact Assessments
- Stakeholder Engagement
- Next-Gen Data Capture
- Federal and State Permitting Support

Overview

Offshore wind (OSW) developers need full-service environmental consulting firms who understand the complexities of planning, permitting, and implementing large-scale infrastructure projects. AECOM has direct and extensive experience with developing the necessary regulatory requirements toward permitting commercial scale OSW projects. Not only does this include our expertise with preparing a SAP and COP packages but also with moving permitting forward with BOEM.

Our Approach

AECOM believes that the successful development of a strategically sound SAP and COP starts with experienced OSW permitting program leads. We offer an experienced, results-oriented team with a successful history of delivering planning, environmental/permitting and design work for OSW projects, including facilities supporting OSW component handling. Our experienced team seamlessly integrates with diverse stakeholder work groups or consultants necessary to develop successful projects.

We assign strong leaders in each discipline to manage work activities and deliverables with a focus on driving the schedule and budget. These leaders are supported by SMEs who provide specialized insight into technical areas, helping us to execute the work efficiently and with the quality expected by our clients. We employ a deep bench of OSW expertise, coupled with permitting and environmental SMEs who have provided leading wind energy consulting expertise.

Areas of Proven Expertise

SITE ASSESSMENT PLANS (SAP). The Bureau of Ocean Energy Management (BOEM) requires the leaseholder to submit a SAP within 12 months of lease execution. The SAP will describe the initial activities necessary to characterize a site within a lease area (e.g., geophysical and geotechnical surveys, installation of metocean buoys) resource assessment surveys. (e.g., meteorological and oceanographic data collection, archaeological/cultural resources, or technology testing activities that involve the installation of bottom-founded facilities (e.g., Light Detection and Radar [LiDAR])). BOEM requires the results of site characterization studies to be submitted with a SAP pursuant to 30 Code of Federal Regulations (CFR) 585.610(b) within 12 months of lease execution (see Permitting Roadmap Figure). AECOM has completed a SAP through successful permitting and BOEM approval for an active OSW lease area in the Massachusetts Wind Energy Area. This included analyzing field data such as high-resolution geophysics, benthic biology, paleo landscapes, and other natural resources. Our SAP was not only well-received by our client and BOEM but was returned to us with only a few minor editing requirements. This direct experience gives AECOM leverage and institutional knowledge toward strategizing and developing a SAP for clients.

CONSTRUCTION AND OPERATIONS PLAN (COP). The COP is a detailed plan which provides a description of all proposed activities and planned facilities (onshore and offshore) for the lease area for the construction and commercial operation of an OSW energy project submitted to BOEM by the developer. AECOM's team has current, up-to-the-minute understanding of BOEM's complex and intricate requirements for COP submittal and has developed strong

relationships based on mutual respect with BOEM regulators. This strong working relationship is instrumental in maximizing efficiencies for COP studies and submittals.

The COP includes data and results from the studies and survey investigations (including those conducted to support the SAP) and provides the analysis of direct and indirect environmental and socioeconomic effects resulting from the offshore wind farm project. We have a deep bench of OSW permitting professionals and technical SMEs within our OSW Practice that lead federal and state permitting, including the development of COPs for two OSW developers in the Northeast.

Pursuant to 30 CFR 585.601, BOEM requires COP be submitted only after a project proposal is clearly defined and there are sufficient data and information for BOEM to conduct technical, National Environmental Policy Act (NEPA), and other required reviews. AECOM has experience with providing support to develop COP strategies and schedules to incorporate data from multiple survey campaigns and contractors. We have provided OSW developers with the full suite of aspects for COP preparation and submittal including designing survey plans to support COP completeness; project permitting at the federal, state and local level; geographic information systems (GIS) project support; and ongoing stakeholder consultations and engagement throughout the review process. As the primary COP writer, AECOM has also authored most of the COP and technical appendices within timelines set by clients. AECOM has conducted regular consultations with numerous federal and state agencies to reduce uncertainty, improve transparency, and minimize conflicts with regard to project development.



SERVICES

Environmental Permitting and Planning Services *(continued)*



Key AECOM Attributes

- Ability to support OSW development from concept to construction
- Access to full-service environmental and engineering capabilities through global/nationwide network
- Local experience with national SMEs

SUBSEA MARINE CABLE ROUTING ANALYSIS. Desktop study constraint analyses for planned marine cable infrastructure projects help build a foundational baseline to design cost-efficient cable systems with minimal and/or controlled risk exposure. AECOM's marine routing team builds marine route analyses that are tailored to clients' goals and engineering needs. Our team of experts combine an in-depth knowledge of the marine natural environment and human uses with engineering, and permitting expertise to build detailed marine routing desktop assessments. The output of the desktop study assessment process includes blueprint marine routes to support our client's downstream project milestones and a catalogue of identified risks with potential mitigation strategies for the planned project footprint. In addition, the analysis process produces recommendations for future research and/or assessment to help clients build viable and cost-effective marine routes.

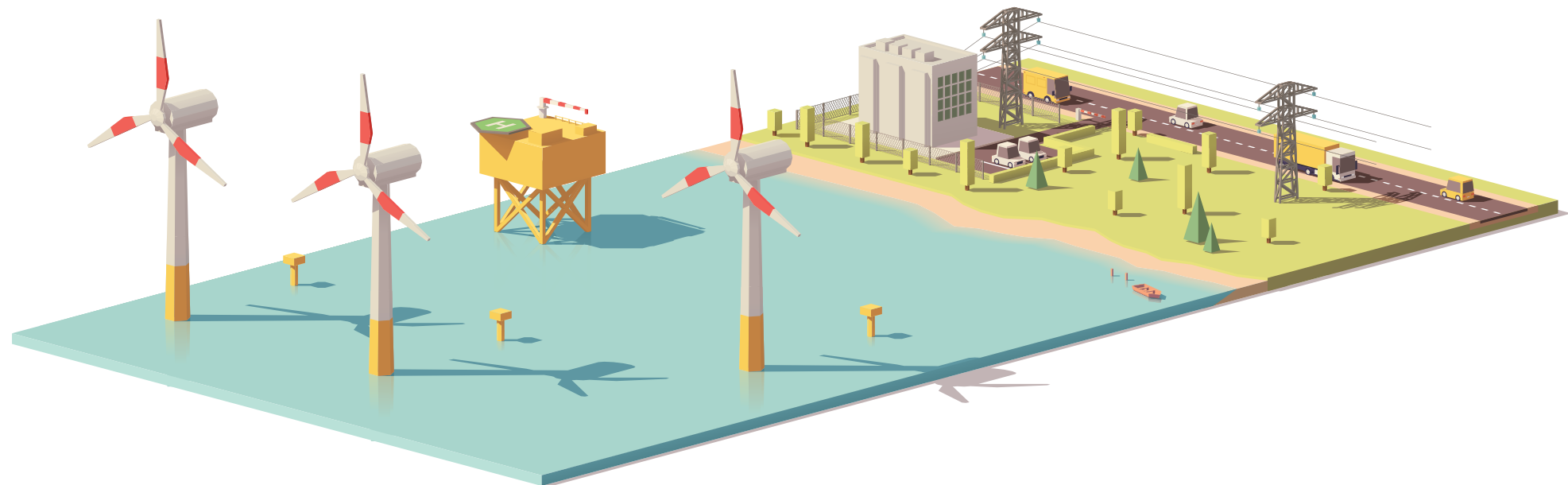
ONSHORE ENVIRONMENTAL IMPACT ASSESSMENTS. AECOM has prepared hundreds of environmental site assessments, environmental assessments, and environmental impact statements and reports for energy projects including solar, wind, geothermal, waste-to-energy, small-scale hydro, transmission lines, and other linear facilities.

SOCIAL IMPACT ASSESSMENTS. We bring to each project a complete, diverse, and interdisciplinary team of experts to holistically analyze potential environmental and social consequences, actively engage stakeholders, and attempt to fully integrate environmental justice into our project planning process. AECOM brings our clients globally - tested innovations, including digital equity analytical tools that help our clients plan and build smart, resilient projects that benefit all citizens – truly achieving optimal triple bottom line outcomes.

STAKEHOLDER ENGAGEMENT. AECOM's community relations experts have been assisting OSW developers by implementing successful, cost-effective public involvement programs to support complex environmental projects for many private and public sector clients. Recent AECOM advancements in digital tools have allowed projects to engage with stakeholders online to keep projects moving along and engage audiences.

NEXT-GEN DATA CAPTURE. As part of our PlanEngage approach toward projects, AECOM's suite of Next-Gen data capture techniques enables us to collect data that is reliable, rich, and relevant to our customer's needs. These data capture techniques enable us to collect data faster and more accurately, reducing cost of labor and travel costs. The high-quality, near real-time, and interactive visual data reporting techniques also improve consistency and turnaround time. We utilize drones/remote sensing technologies to collect previously inaccessible data, thereby enriching data sets and improving safety.

FEDERAL AND STATE PERMITTING SUPPORT. In addition to the BOEM SAP and COP, as noted in the **ENVIRONMENTAL PERMITTING & SOCIAL IMPACT ASSESSMENT** list, there is a complex federal, state, and local permitting process that will run concurrently with or tangentially to the BOEM process. One of the keys to an OSW project progress is making sure projects not only comply with federal laws, but also address the required state environmental, resource, and coastal management plans, and in some states, the regional and local permits and approvals. AECOM works with clients to support the federal and state regulatory review of a proposed Project. As the lead federal agency, BOEM will lead and coordinate environmental review of the project under the NEPA.



SERVICES

Upfront Key OSW Development Service Offerings

MARINE ARCHEOLOGY PROGRAM. AECOM's Qualified Marine Archeologists (QMA) are supporting OSW developers analyze results of the geotechnical and geophysical surveys to determine if marine cultural resources are present in the project area.

GEOPHYSICAL/GEOTECHNICAL SURVEY PLANNING. AECOM has provided survey planning for two OSW developers in the Northeast working seamlessly with geotechnical contractors.

ROUTING AND SITING OF MARINE AND TERRESTRIAL CABLES. We are currently providing this key service that includes planning and strategies for high voltage direct current (HVDC) and/or high voltage alternate current (HVAC) for multiple OSW developers.

STAKEHOLDER ENGAGEMENT. AECOM's Strategic Communications Team is currently designing and developing stakeholder engagement plans for OSW developers and OSW port owners.

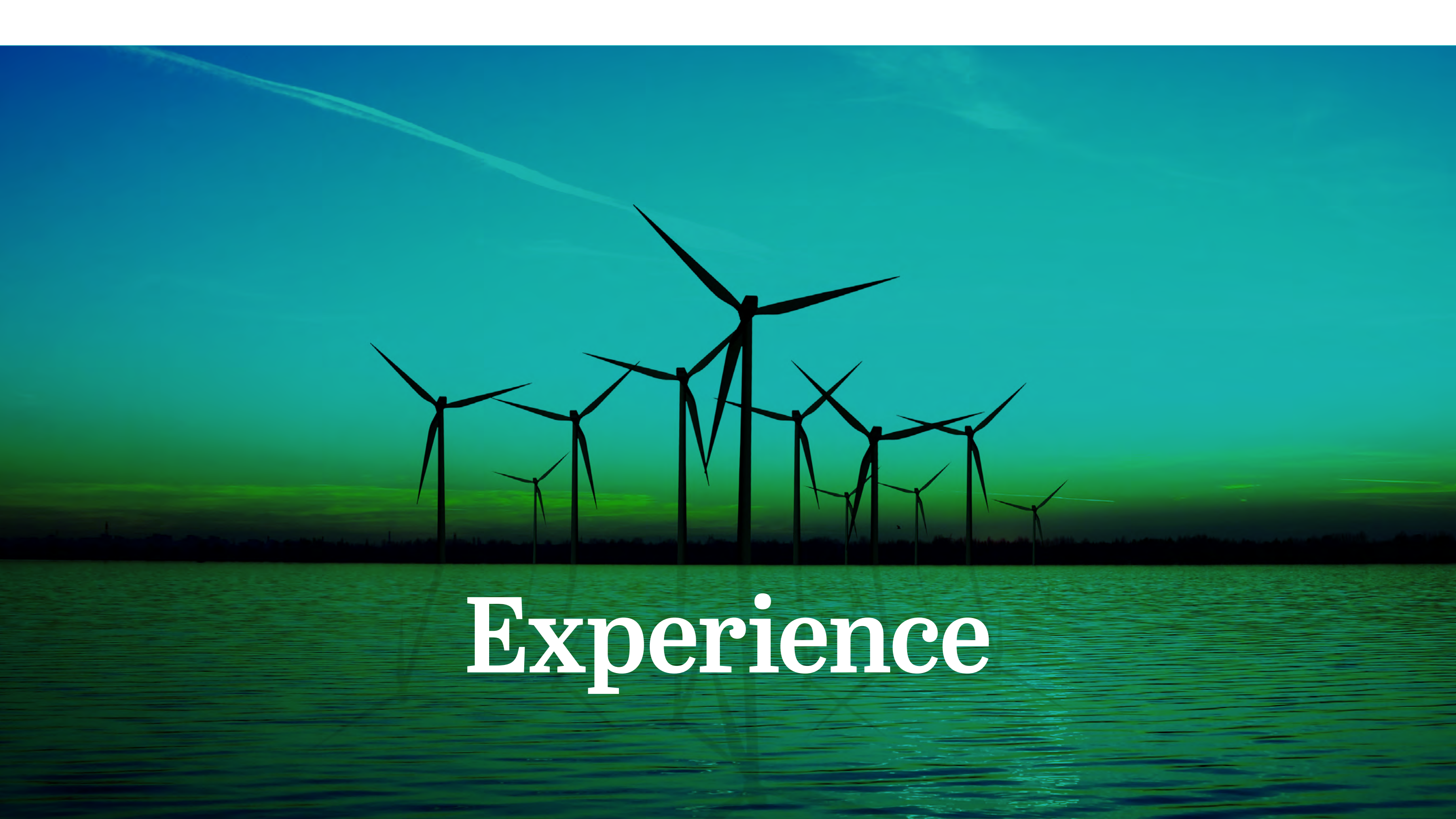
OFFSHORE WIND RENEWABLE ENERGY CERTIFICATE/ POWER PURCHASE AGREEMENT (OREC/PPA). AECOM is currently providing support to OSW developers on OREC and PPA strategies for New York State and the State of New Jersey.

PROTECTED SPECIES. AECOM marine mammal specialists are supporting OSW survey operations in the Northeast by providing support to develop Incidental Harassment Authorizations [IHA] for marine mammals and other protected species including the deployment of AECOM's on-staff Protected Species Observers (PSO).

IN-HOUSE BENTHIC LABORATORY. AECOM's benthic laboratory located on Cape Cod in Massachusetts has supported OSW developers with large benthic surveys and associated analysis.

TRIBAL ENGAGEMENT SERVICE. AECOM's Office of Native and Sovereign and Tribal Relations (ONSTR) is presently conducting tribal coordination for two confidential OSW projects in the New York Bight and the Massachusetts wind energy areas (WEA).

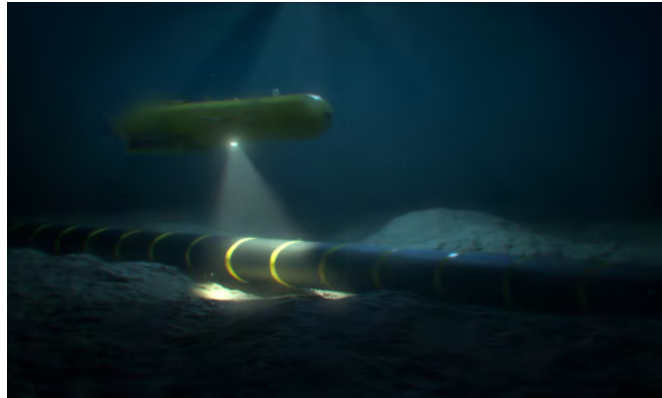




Experience

EXPERIENCE

Offshore Wind Cable Routing and Siting Analysis in NY, NJ, and Federal Waters



AECOM brought together a team of terrestrial, marine routing and permitting experts to find optimal marine-terrestrial cable route options for the client that balanced project costs and schedule, while minimizing environmental impacts.

Client
Confidential Offshore Wind Client

Location
New York City, New York State Waters and Federal Waters, USA

Years
2022-present

Project Overview

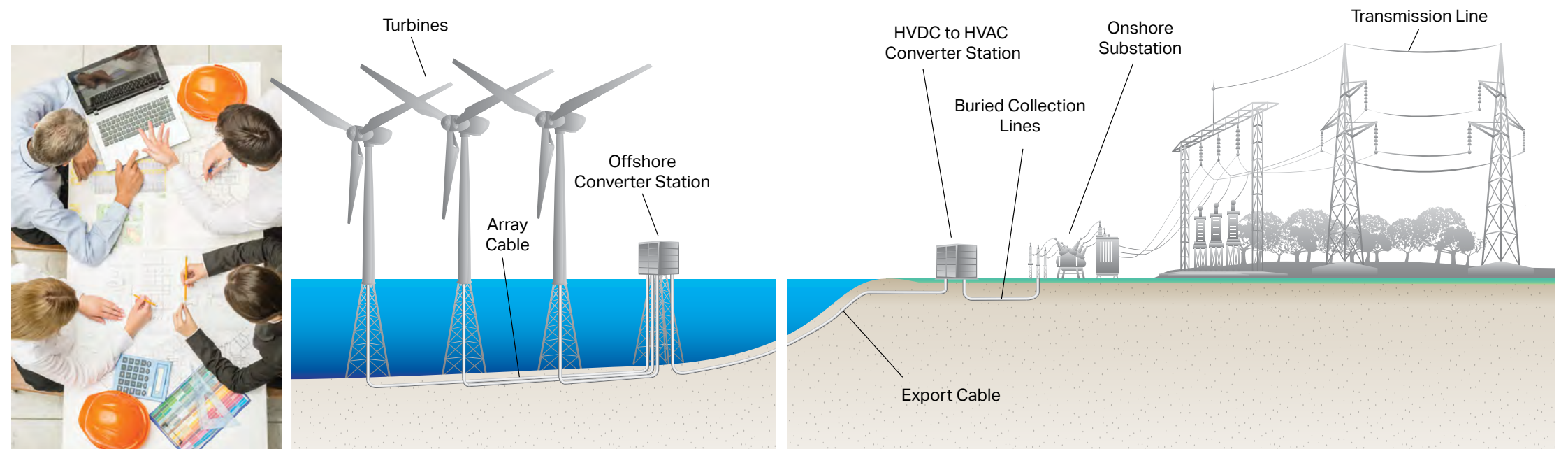
AECOM is analyzing preferred and alternative HVDC and HVAC transmission export cable routes in Federal Waters, New York State Waters, and New Jersey State Waters that will interconnect to onshore converter stations and interconnection points in New York City.

Client Benefits

- New York will benefit from a significant injection of clean, renewable energy into the electrical grid.
- AECOM identified offshore wind transmission cable routes that avoided sensitive habitats and culturally significant resources
- AECOM identified landing sites that will minimize environmental impacts by using parking lots or undeveloped open lands where practicable. Lands with existing natural resources such as forests or wetlands were avoided.
- The team minimized environmental impacts of terrestrial routes by using road right-of-ways where practicable.
- AECOM identified several route constraints and provided viable alternatives that helped minimize impacts to client schedule and cost.

Work Performed

AECOM's role in the project involves analyzing risks and constraints towards identifying an efficient and cost-effective cable route that will inform marine surveys, environmental permitting and subsequent engineering and routing of the export cable. Work to date included detailed technical analyses to assess marine routing constraints, terrestrial routing constraints and a landing point assessment process, to assess the overall best routing configuration for the client that balanced offshore and onshore risk factors. Engineering specifications and inputs drove the routing processes to account for adequate spacing and design requirements. This project is a geographic information system (GIS)-driven assessment that folded in both qualitative and quantitative metrics in the assessment process.



EXPERIENCE

SouthCoast Wind Offshore Wind Project Technical Study & Permitting Support



With timely advancement of project permitting, objective technical studies, understanding of agency and stakeholder concerns, and a common goal to minimize impacts, SouthCoast Wind will be among the largest contributors towards Massachusetts's net-zero emissions goal, eliminating 4 million metric tons of GHG/year, the equivalent to emissions of more than 5 million miles driven each year.

Client

SouthCoast Wind (formerly Mayflower Wind)

Location

Massachusetts and Rhode Island, USA

Years

2019-present

Project Overview

AECOM designed and executed technical studies and field surveys to support the Construction and Operations Plan (COP). AECOM is also leading the federal, state, and local permitting for both onshore and offshore facilities. We are currently supporting Mayflower Wind with post-COP services and have made two major state permit filings.

Client Benefits

- AECOM completed eighteen technical studies and associated reports to support the filing of the COP in 14 months after contract execution.
- AECOM worked closely with National Marine Fisheries Service (NMFS) to develop a benthic sampling program that responded to both BOEM guidelines and NMFS recommendations, minimizing costs and maximizing data collection in locations of greatest importance to NMFS.
- The team designed and executed a visual impact assessment using methods acceptable to BOEM, prior to the release of formal BOEM guidance. AECOM also negotiated on behalf of Mayflower Wind to reduce the total number of cumulative impact simulations required from 120 to 45, resulting in significant cost savings to the client.

Work Performed

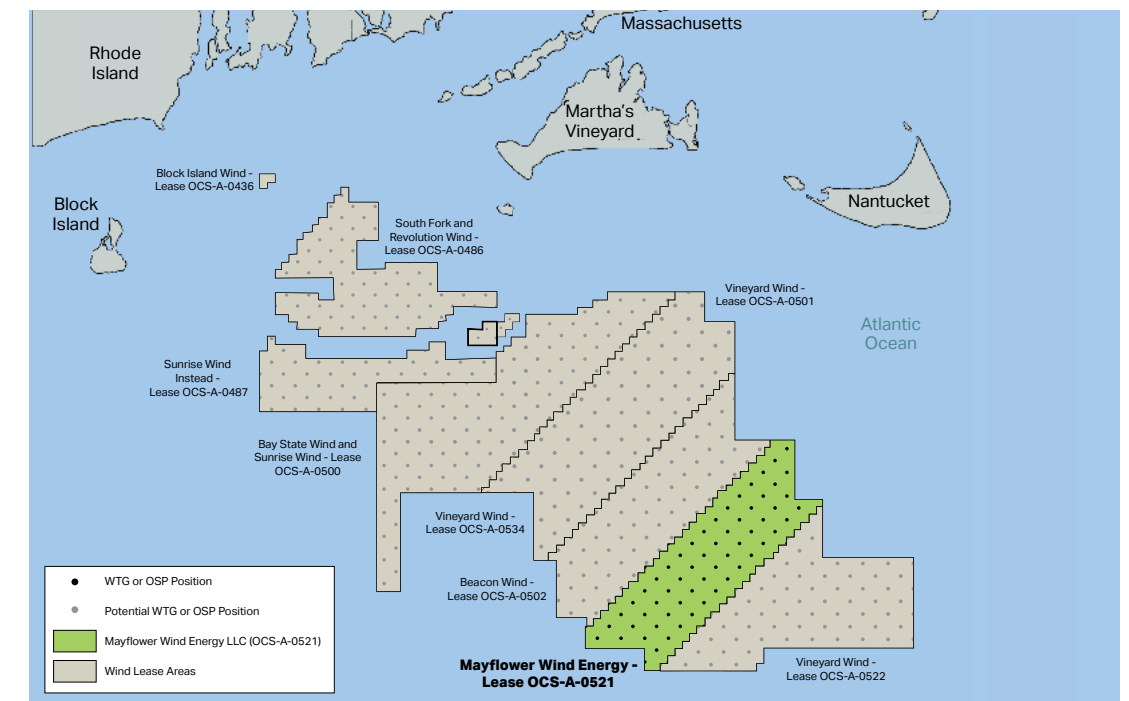
AECOM is leading the execution of technical studies in support of the development of the COP as well as leading federal, state and local permitting for a utility scale offshore wind project in the Massachusetts/Rhode Island Wind Development Area. AECOM has provided the following support for the project:

- Designed and executed technical assessment studies to support the COP including:
 - **OFFSHORE:** bats, visual impact, benthic infauna and seafloor characterization, finfish, Essential Fish Habitat (EFH), shellfish, water quality, air quality/emissions, seagrass, military activity, designated protected areas, and in-air acoustics
 - **ONSHORE:** bats, birds, visual impact, water quality, air quality/emissions, wetlands/watercourses, vernal pools, threatened & endangered species, military activity, designated protected lands, in-air acoustics, cultural resources, and contaminated soils and groundwater
- Oversaw and managed subcontractor completed surveys and studies, including:
 - Electromagnetic field, underwater acoustics, hydrodynamic and sediment transport and scour modeling, and protected species mitigation and monitoring plan
- Designed the benthic survey program, completed laboratory analysis of benthic infauna samples in AECOM's in-house laboratory, and analyzed seafloor video.
- Oversaw and executed field surveys for:
 - Seagrass, wetlands and watercourses
- Completed a Terrestrial Archaeological Resource Assessment (Phase 1A); Secured Mass Historical Commission (MHC) permit for Phase 1B field survey; developed an Archaeological Construction Monitoring Plan

- Prepared an Oil Spill Response Plan and Safety Management System
- Prepared Federal Coastal Zone Consistency Statements for Massachusetts and Rhode Island
- Developed detailed schedules for studies, surveys as well as federal, state and local permitting
- Provided permitting strategy support
- Prepared major state permit filings including the Energy Facility Siting Board Petition and Massachusetts Environmental Policy Act (MEPA) Environmental Notification Form
- Supported client-led stakeholder outreach

Ongoing and future work includes:

- Preparation of federal, state and local permitting (applications, supporting documentation, hearings, agency consultation and negotiation)
 - MEPA Draft Environmental Impact Report and Final EIR, Massachusetts Historical Commission consultation, Outer Continental Shelf (OCS) air permit, NMFS consultation; US Army Corps of Engineers Section 404, 10 and 408; Cape Cod Commission Developments of Regional Impact (DRI), Notices of Intent (Falmouth, Nantucket and Edgartown)
- Execution of terrestrial Archaeology Phase 1B Survey (scheduled for Q3 2022)
- Execution of supplemental field surveys (if required): Vernal pools, shellfish, wetlands, threatened and endangered species
- Preparation of mitigation plans



EXPERIENCE

Environmental Permitting for Beacon Wind Offshore Wind Project



The AECOM team's expert regulatory knowledge, broad experience base and innovative GIS portal served to streamline ongoing permitting for this critical offshore wind project.

Client

Equinor

Location

Massachusetts, USA

Years

2021-2023

Project Overview

AECOM is responsible for environmental permitting which includes the development of the Site Assessment Plan (SAP), the Construction and Operations Plan (COP), as well as key federal, state, and local permits, approvals, and consultations.

Client Benefits

- Created comprehensive GIS portal to support the project and agency filings. The portal incorporated existing data sources and new survey data collected throughout the project area. Access to the portal provided expedited map creation for internal and external meetings as well as permit applications.
- The team's expert regulatory knowledge and professional relationships provided strategic support, streamlining agency interactions and plan submittals.

Work Performed

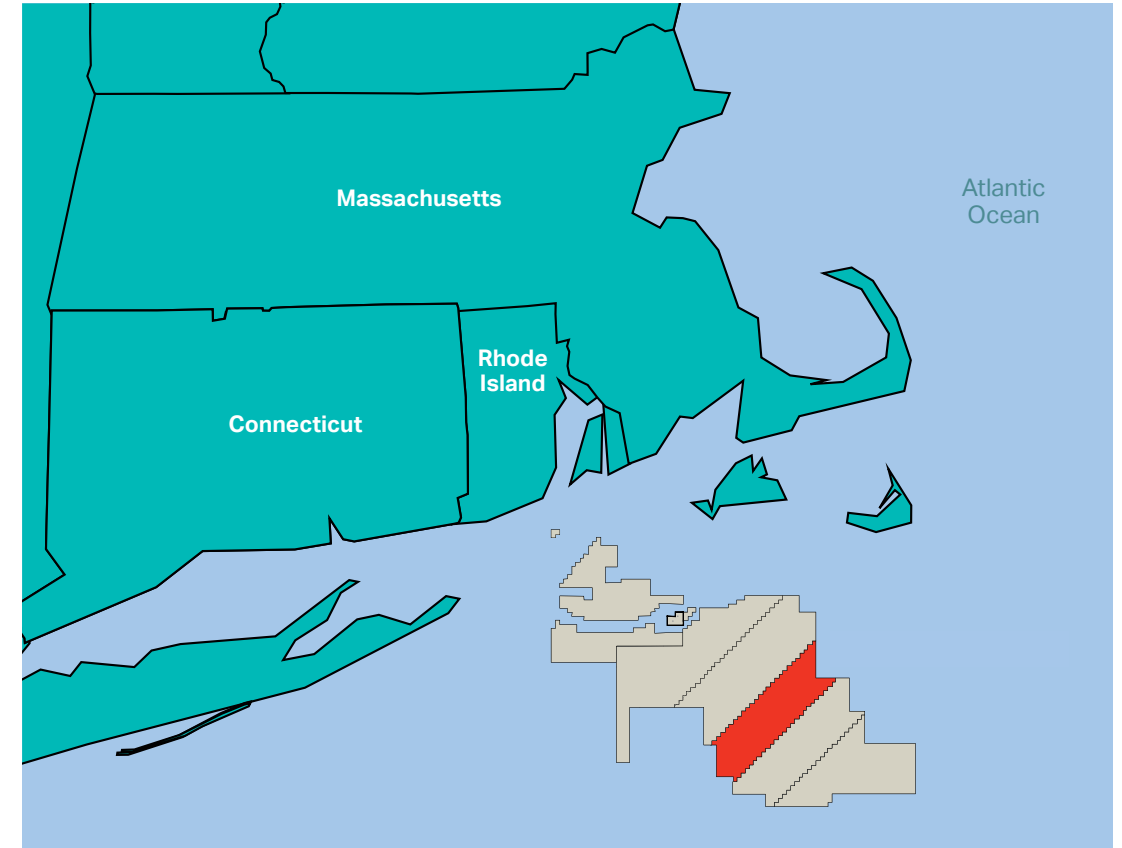
To support the SAP submittal, AECOM and its contractors developed and submitted an Incidental Harassment Authorization (IHA) for the take of marine mammals. The AECOM team is assessing various alternatives that would bring offshore energy from the wind farm to New York, via a submarine cable through Long Island Sound (LIS) New York.

AECOM is also in the process of conducting or leading the development of numerous surveys to support the Construction and Operations Plan (COP) including the visual impact assessment, sediment transport, air, noise and underwater sound, airspace, marine mammals, fisheries, and benthic analysis. In addition to the Site Assessment Plan (SAP) and COP, AECOM is also supporting applications for Power Purchase Agreements developing visual impact assessments and fisheries economics studies.

This project includes major coordination and communication with federal (NMFS, USFWS, USEPA, and BOEM) and various state agencies. Services included environmental due diligence, and conceptual converter station design alternatives.

AECOM evaluated:

- The feasibility of potential export cable landfall locations, onshore converter station site(s), and the interconnection to a Point of Interconnect.
- The alternative locations for the onshore converter station, landfall locations including cable calculations, cable routing of the export cables, and interconnection cables which were ranked and assessed for risk.
- The different alternatives considering potential constraints, cost, and schedule, including site preparation, civil structures, land rights, cable routing, zoning, environmental and regulatory interfaces as part of a ranking and decision tree process.



EXPERIENCE

Cable Landfall Feasibility Studies for Ocean Wind Project



In its final award decision, the NJ Board of Public Utilities stated “While all of the proposed projects would help New Jersey reduce greenhouse gas emissions, [the winning bidder’s] environmental protection plan, including mitigation of environmental impacts, was most complete and most advanced; the developer’s experience in this arena further distinguished its application.”

Client

Ørsted

Location

East Coast, USA

Years

2018-2020

Project Overview

AECOM provided engineering and environmental consulting services to a confidential client for development of a major, offshore wind farm, to be located on the outer continental shelf off the east coast of the United States. The scope of services includes:

- Electrical grid reinforcement review and analysis
- Landing locations/corridor analysis and preliminary design for marine/land-side cable routing points
- Offshore wind renewable energy credit (OREC) support

Work Performed

AECOM completed a Grid Reinforcement Review and Analysis Report documenting an assessment of the current arrangement and condition of the electrical transmission line systems (grid) identified by the project owner that could be utilized to accept the off-shore power. AECOM electrical engineers evaluated grid condition with respect to capacity and overload potential under several potential project interconnection scenarios. The team completed a field review and photo documentation of existing right-of-way conditions and tower structures from public roads and access points, completed a conceptual review of upgrade requirements, and developed a risk screening matrix for the overloaded facilities including recommendations on outage feasibility and costs.

To address potential landing points and their interconnection to land-side cable routing alternatives, AECOM completed a feasibility study assessing access options using a horizontal directional drilling (HDD) construction technique. The study involved using HDD methods to access on shore cable routes to inland substation connection points, considering also environmental, regulatory and land use constraints. AECOM provided FS reports and preliminary designs for six locations, including a barrier island crossing and a bay crossing to landfall points in both residential and open areas. The study included consideration of existing site geotechnical data, limitations on power cable pulling lengths, access and other constructability issues. A construction cost estimate was provided.

AECOM specialists also supported the owner during meetings with the responsible state environmental permitting agencies, and the development of a successful 1100 MW bid for the offshore wind project in New Jersey. Work included identification and coordination of inputs from the development team required to satisfy the regulatory requirements for the bid, format and structure of the bid content, presentation strategy, technical editing, and content development. AECOM also prepared the environmental impact assessment and emissions calculations as well as providing support for the economic cost-benefit analysis. In its final award decision, the NJ Board of Public Utilities stated “While all of the proposed projects would help New Jersey reduce greenhouse gas emissions, [the winning bidder’s] environmental protection plan, including mitigation of environmental impacts, was most complete and most advanced; the developer’s experience in this arena further distinguished its application.”



EXPERIENCE

Program and Construction Management, Cost Estimating, and Engineering Consulting Services for Smart Path Connect Transmission Project



This project is assisting with the NYS Governor's 2030 renewable goals by unbottling renewables in upstate and providing this capacity to areas downstate. Execution of the project with NYPA ensured that WBE, MBE and SVD0B goals were a key focus to the award and a continued commitment from the construction contractors through the execution of the project.

Client

New York Power Authority

Location

Northern New York State, USA

Contract Value

USD 11MM

Years

2020-present

Project Overview

New York Power Authority's planned Northern New York Priority Transmission Project aims to unbottle the renewable energy in Northern New York (Zone D) through transmission upgrades on existing circuits to increase power transfer capabilities. Increasing supply of renewable energy to downstate New York.

In support of this major transmission overhaul, AECOM is playing a leading role in various critical tasks for this client, and many others, as it relates to the development of clean energy across New York State in support of the Governor's vision, and the Climate Leadership and Community Protection Act. For this overall program, AECOM currently provides program management, construction management, estimating, scheduling, value engineering, and various project control activities.

Client Benefits

AECOM's team reviewed and developed the data collected to understand more detailed material take-offs. Our transmission and substation design and construction management professionals were teamed up with estimating and project control personnel to generate a detailed cost estimate and overall program schedule, to ensure reasonableness of execution sequence, planned outage coordination, inherent risk, and detailed program costs for individual components. Underpinning sources in developing this estimate included, but were not limited to:

- Available historical information from similar projects for labor, material, equipment
- Familiarity with supplier, subcontractor/union arrangements
- Published price lists, where available
- Team's professional experience on previously executed projects of similar type

Work Performed

During this project's continued development cycle, AECOM provided detailed cost estimating services. A thorough review of the project's conceptual design package, for both transmission lines and substation packages, were utilized to build a ground-up overall project estimate for budgetary purposes in preparing to collect bid solicitations from the local market. AECOM also currently acts as the Project Manager for the transmission scope of the project, construction manager, and also hosts the program's project management information system.

Initial project data available for review included:

GENERAL

- Various technical specifications
- Bill of materials
- Planned program schedule

FOR TRANSMISSION LINES

- Description of scopes
- KMZ files, which included the approximate pole locations
- Transmission line design information, such as cable ratings, span length, structure data, conductor data, static/OPGW wire data, etc.

FOR SUBSTATIONS

- Description of the scope
- Site layouts, KMZ files
- Substation drawings, including one line diagrams, general arrangements, and section/elevations

The overall effort was broken into several specific tasks to ensure an effective evolution of the project work scope, with several check-in points along the way. These tasks were:

1. Review of preliminary design documents
2. Preparation of a basis of estimate document
3. Detailed estimate for transmission line components
4. Detailed estimate for substation line components
5. Risk assessment, value engineering and cost optimization
6. Final report and presentation
7. On-going program and construction management

This effort is on-going and AECOM looks forward to a successful completion of this critical project to ensure the continued successful development of this marquee transmission upgrade program within New York State.



EXPERIENCE

Connecticut State Pier Infrastructure Improvements



AECOM is supporting the Connecticut Port Authority (CPA) to undertake infrastructure improvements for the 30-acre State Pier in New London.

Client

Connecticut Port Authority

Location

Connecticut, USA

Construction Value

USD 260M

Years

2018-present



Proud recipient of the 2022 Climate Change Business Journal Award for Offshore Wind Infrastructure

Project Overview

These improvements will transform the pier into a heavy-lift capable marine terminal that will accommodate a wide variety of cargoes, including offshore wind turbine generator staging, pre-assembly and load-out. The proposed State Pier infrastructure improvements are designed to address previously identified facility shortcomings and enhance the State Pier facility and site conditions to accommodate future cargo needs and capitalize on opportunities for the State. AECOM focused on several key services:

- Environmental impact, assessment and permit application/approvals
- Port planning and design review
- Cost estimating and master project milestone schedule (MPMS) development/management
- Construction management at risk procurement
- Construction administration

Client Benefits

- 1st purpose built offshore wind staging, pre-assembly and load-out terminal
- The pier's two-berth design significantly addresses resiliency and carbon-reduction by enabling shore-to-ship power to docked ships, eliminating customarily-generated ship pollution

Work Performed

Through a competitive public procurement, AECOM was awarded a Construction Administration contract in June 2020. On behalf of the CPA, we have provided design reviews, evaluated value engineering alternatives and created/coordinated a series of project management services, including Action Item Trackers, Early Work Packages, Remediation Action Plan strategies and a CM at Risk solicitation. Infrastructure improvements are categorized in the following five primary components:

UPLANDS: excavation of substantial portions of the site to achieve final grades, demolition of existing buildings, installation of new electric, storm, wastewater and potable water utilities and final surface treatments.

NORTHEAST BULKHEAD (DELIVERY VESSEL BERTH): demolition of existing pier platform and in-water mooring dolphins, dredging and seabed preparation and construction of new bulkhead, heavy-lift pile-supported platform and shore to ship utility services.

STATE PIER (INSTALLATION VESSEL BERTH): partial demolition of existing pier structures, installation of new king pile system, heavy-lift pile-supported platform, dredging and seabed preparation and shore-to-ship utility services.

CENTRAL WHARF: land reclamation via new king-pile system connecting State Pier with CVRR Pier, combined with beneficial reuse of select dredge sediments and on-site fill material.

REMEDIATION: consistent with approved Remedial Action Plans, address several areas of concern in advance of and in collaboration with redevelopment activities.

Commencing in late 2018, AECOM generated a series of environmental studies and alternative analyses, which culminated in a comprehensive Joint Permit Application (JPA) and subsequent CTDEEP and USACE approvals that have enabled redevelopment of the State Pier facility through the least environmentally impactful alternative.



Existing conditions



After infrastructure improvements

EXPERIENCE

Paulsboro Marine Terminal



The AECOM team used frequent and effective communication to transition under-performing brownfield site into a fabrication and logistics hub that serves multiple cargos including offshore wind's monopile foundation.

Client

South Jersey Port Corporation

Location

New Jersey, USA

Contract Value

Phase 1: USD 175M | Phase 2: USD 325M

Years

Phase 1: Completed 2017 | Phase 2: Ongoing

Project Overview

AECOM team members provided program and construction management services that included planning, permitting, conceptual design, NEPA compliance, construction management and site remediation compliance for a 150-acre multi-use bulk and breakbulk terminal located on an existing brownfield site on the Delaware River.

Client Benefits

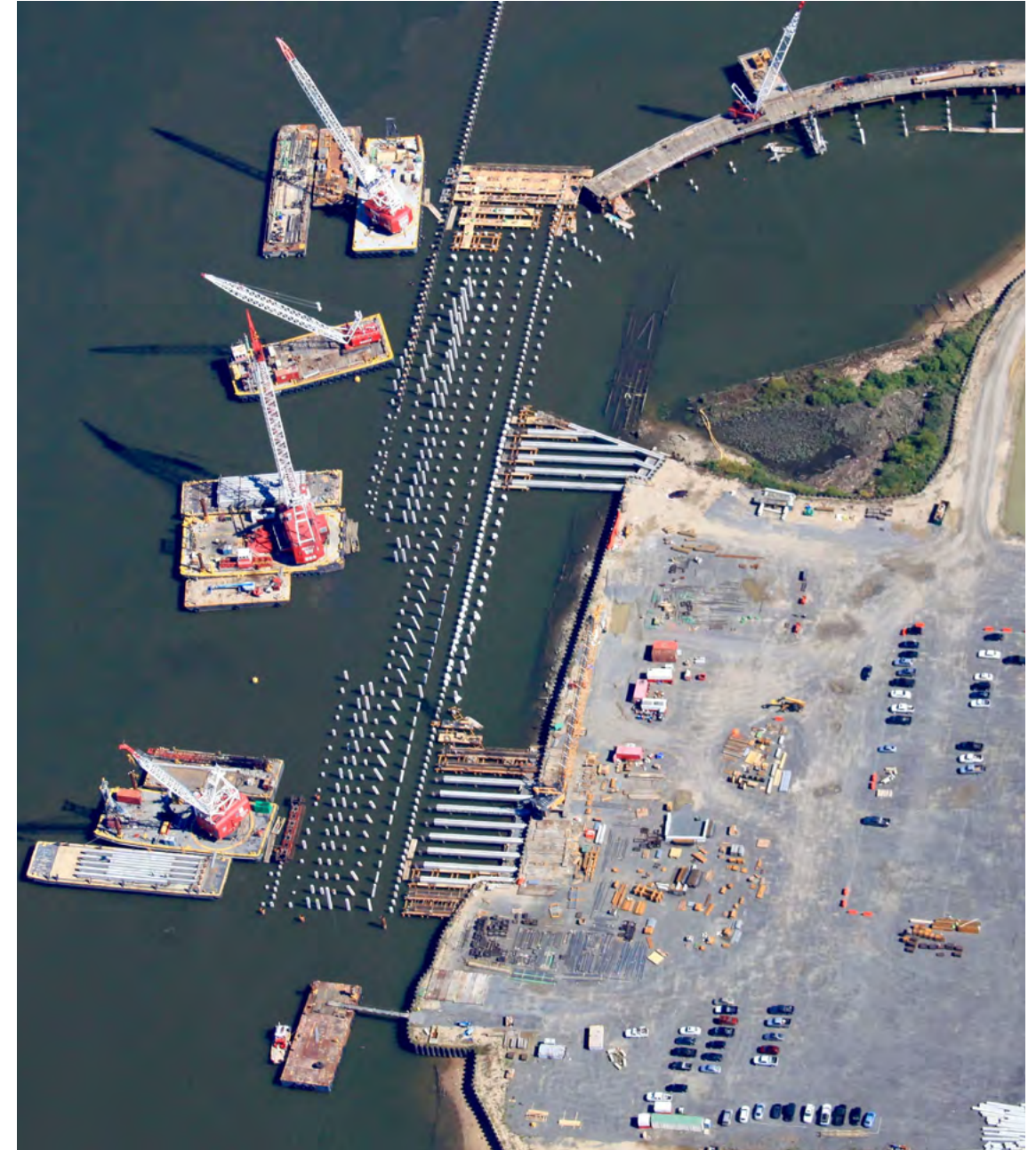
- Comprehensive alternatives analysis helped project stakeholders decide on best alternatives from a cost and permitting perspective.
- To offset a potential risk of differing subsurface conditions, our team suggested a comprehensive subsurface investigation that enabled unforeseen subsurface conditions to be the Contractor's risk.
- Our team recognized the need for early coordination with terminal and operations to understand operational constraints, technical criteria and business considerations. These elements were integrated into the design details, construction sequencing and methodology for delivering constructed works.
- To implement EIS development and permitting concurrently, frequent and effective communication between the design and environmental teams, together with federal and state regulators and the owner, helped minimize the timeline required to achieve permit approvals.

Work Performed

AECOM developed conceptual plans and design characteristics to accommodate Offshore Wind components as well as recycled metal, forest products, steel, project cargo and RO-RO operations. Terminal infrastructure included a three-berth wharf, barge berth, backland infrastructure, and rail and road access. AECOM worked extensively alongside British Petroleum's own engineers involved with mitigating the previous Oil Terminal Storage site as well as with local landowners and County/State officials in remediating and restoring the site to make the terminal redevelopment a reality.

As part of the conceptual planning process, AECOM worked with the Port Operator to navigate a comprehensive alternatives analysis necessary to acquire the federal, state, and local permits to design and construct the proposed Terminal. Some of the permits included: United States Army Corps of Engineers Section 10/404 Permit and Jurisdictional Determination; New Jersey Department of Environmental Protection's EO215/Environmental Impact Statement as well as the Wetlands Permits, Waterfront Development Permit, and the Water Quality Certification.

During construction, AECOM provided construction management and site inspection services for Phase I of the wharf, uplands, and access bridge construction project. Services provided included overall site supervision, field verification of construction activities, claims review, and verification of payments.



EXPERIENCE

Sustainable South Brooklyn Marine Terminal



AECOM is assisting with preliminary engineering and environmental assessment for the redevelopment and reactivation of a 73-acre maritime terminal.

Client

Sustainable South Brooklyn Marine Terminal

Location

New York, USA

Construction Value

USD 250M

Years

2019-present

Project Overview

SSBMT is part of the Port of New York and New Jersey and operated and maintained by Red Hook Container Terminal and Industry City. Located in Sunset Park, Brooklyn, the project is a multi-purpose offshore wind support facility that will eventually include a Wind Turbine Generation (WTG) component staging yard, multiple operation and maintenance bases and New York City's largest substation. While the SSBMT site has been dormant and mostly inactive for the past 30 years, the waterside and landside infrastructure is undergoing extensive redevelopment due to the unique handling characteristics of offshore wind components that require considerably higher structural capacity than traditional maritime facility requirements.

Significant work is required to reactivate the site. The \$250M project involves reconstructing or repairing multiple bulkheads, constructing two heavy-lift crane platforms, constructing new SOV and CTV platforms for O&M activities, dredging multiple berths to provide access to the federal channel, overall site work (including repaving, regrading, stormwater management and utilities), and site preparation work related to the buildings to be constructed on site.

Client Benefits

- Our work is helping to deliver NY State's initial 2.5GW of offshore wind via Empire Wind 1 and 2 utilizing the redeveloped SBMT for component staging, pre-assembly and load-out activities during offshore installation.
- Following completion of offshore wind farms, SBMT is expected to facilitate 20+ years of operations and maintenance for multiple offshore wind farms.

Work Performed

AECOM has assisted with the following:

- Program management
- Site assessment
- Preliminary engineering
- Environmental assessment
- Environmental permitting
- Cost estimating
- Benefit cost assessment
- Project scheduling
- Assisting the client with development of multiple federal and state grant applications

AECOM worked with multiple stakeholders to support the port improvement plan, costing, environmental assessment, permitting, and modifications to the dormant site. Our team assisted with the planning and initial design for the first user (offshore wind developer) while accommodating future users such as container and breakbulk cargo as well as a limited area to support the offshore wind developer's operation and maintenance program for multi-purpose users. This project demonstrates AECOM's experience with port infrastructure and modification to support offshore wind development.



EXPERIENCE

Offshore Wind

CONFIDENTIAL CLIENT - STRATEGIC SUPPORT FOR DEVELOPMENT OF OFFSHORE RENEWABLE ENERGY CREDIT (OREC) APPLICATION.

AECOM supported the development of a proposal for a confidential developer for an offshore wind project in New Jersey. AECOM assisted the developer with strategy and understanding the requirements of the request for proposals for an OREC. Work included identification and coordination of inputs required to satisfy the regulatory requirements for the bid, format and structure of the bid content, technical editing, and content development. AECOM also provided environmental impact assessment, emissions and economic cost-benefit support for the bid.

ØRSTED - SOUTH FORK OFFSHORE WIND FARM, ENGINEERING AND ENVIRONMENTAL SUPPORT FOR SUBMARINE CABLE ROUTING.

AECOM managed the route engineering, cable design, and onshore and offshore marine geophysical and geotechnical surveys associated with submarine cables for a 30 MW offshore wind project off Rhode Island and New York. AECOM managed and performed the environmental permitting; engineering and design of inter array, foundation design and export cable & transmission cables including biological and sediment chemistry analysis, prepared horizontal direction drill designs of the cable landfalls, developed a marine mammal monitoring and observation program, and developed survey protocols for marine geophysical surveys (onshore and offshore).

BOEM - PROGRAMMATIC ENVIRONMENTAL ASSESSMENT (EA) FOR THE MASSACHUSETTS WIND ENERGY AREA (WEA), COMMERCIAL WIND LEASE ISSUANCE AND SITE ASSESSMENT ACTIVITIES ON THE ATLANTIC OUTER CONTINENTAL SHELF (OCS) OFFSHORE MASSACHUSETTS.

AECOM prepared an Environmental Assessment (EA) that analyzed environmental impacts anticipated as a result of commercial wind lease issuance in Federal waters offshore of Massachusetts, in the Massachusetts Wind Energy Area (WEA). AECOM prepared the EA and reviewed the public/ stakeholder input received by BOEM. Early in the project, AECOM, in conjunction with BOEM staff, identified the need to revise how BOEM's scenario of routine and non-routine activities and the description of site assessment and site characterization activities were presented in the EA. AECOM, in collaboration with BOEM, developed an updated approach and the resulting product was a more concise and easier to understand explanation of technical material and methodology that would be used by BOEM and the lessees to carry out the activities as part of the Proposed Action.

CAPE WIND OFFSHORE WIND FARM - BOEM. AECOM prepared a comprehensive Administrative Record (AR) for the controversial Cape Wind Energy Project. The AECOM team provided support services to BOEM to document the decision process, development of findings for the EIS, the record of decision, execution of Project Lease, and approval of the COP. Using Concordance Litigation Software, the AECOM team converted ~150,000 documents into database files, reviewed, categorized, and organized into a searchable, comprehensive database

and an accompanying index. These correspondence, memoranda, reports, and other data sources were reviewed and organized to aid BOEM's decision-making. The AECOM Team used GIS and other technology tools (e.g., 3D modeling, animation, photographic simulation, video production) to create visual simulations for with and without project conditions, providing strong and defensible visual imagery to convey potential project impacts to the public.

BOEM OREP AND BSEE. AECOM performed six recent offshore wind projects for BOEM OREP and Bureau of Safety and Environmental Enforcement (BSEE):

- Programmatic Environmental Assessment (EA) for the Massachusetts Wind Energy Area (WEA)
- Programmatic EA for the New York WEA
- Benefits Analysis for offshore wind to improve the BOEM NEPA process for offshore wind
- OCS Interactive Registry of Archaeological Surveys to track all wind development areas on the Atlantic OCS as the agency's primary tool for OCS compliance studies and reviews
- Renewable Energy View-shed Analysis and Visual Simulations for the New York OCS Planning Area to provide BOEM with a spatially accurate and realistic visual simulation for an offshore wind energy facility on the OCS offshore of Long Island
- Biological Assessment (BA) for the offshore wind lease areas of Massachusetts
- Development of a quantitative method for the evaluation of the relative environmental sensitivity and productivity of the OCS

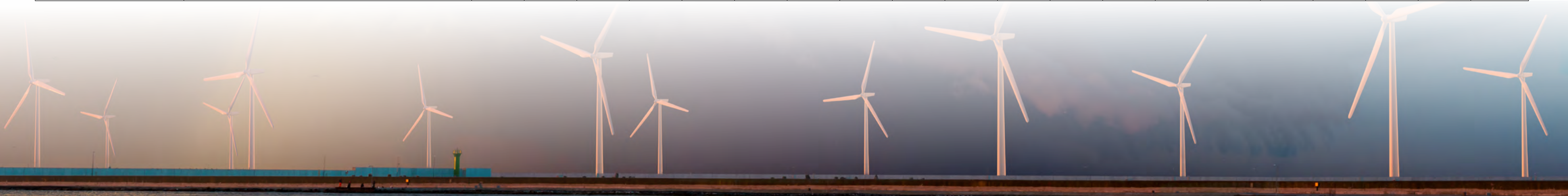


The image features a series of wind turbines silhouetted against a vibrant, teal-to-blue gradient sky. The turbines are positioned across the middle ground, with their three-bladed rotors clearly visible. Below the turbines, a dark, calm body of water reflects the scene. The overall aesthetic is clean and modern, emphasizing renewable energy.

Staff Resources

ENVIRONMENTAL STAFF EXPERIENCE MATRIX

PERSONNEL	TITLE	OSW /BOEM SAP / COP	OSW Marine Studies / Survey	OSW Interconnect Siting	State & Federal Permitting	T-Line Siting / Permitting	GIS and Mapping	Onshore Wind / Solar Studies	Subsea Cables	NEPA / IAP	ESA, MMPA, EFH	Sediment / Water Quality	Physical Oceanography	Marine Biological Resources	Ecological Mitigation and Restoration	Marine Field Surveys	Wetland Delineation	Cultural / Archaeological Studies	Underwater Acoustics	Marine / Coastal Project Permitting	Risk Assessment
KEY STAFF																					
Sherrí Albrecht	OSW Terrestrial Permitting Project Manager	•			•			•	•	•	•	•		•	•		•			•	•
Christine Archer	Senior Marine Scientist	•	•		•			•	•	•		•		•	•					•	•
Barry Baker	Offshore/Onshore Routing/Siting Specialist	•		•	•	•		•	•	•		•			•					•	•
Mark Baker	OSW GIS Practice Lead	•			•		•				•										•
Jill Cahoon	Stakeholder Engagement Lead	•	•	•	•		•	•	•	•								•			•
Ernesto Calix	Benthic Marine Taxonomist	•	•		•			•	•	•	•	•		•	•	•			•	•	•
Kristen Durocher	Senior Marine Scientist	•	•		•			•	•	•	•	•		•	•	•				•	•
Joe Grinnan, RPA	Underwater Archaeology Program Manager	•	•	•	•				•					•				•			
Nathan Henderson, CFP	OSW Technical Practice Leader	•	•	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•
Dennis Lowry	Senior Environmental Permitting Specialist	•	•		•			•	•	•	•	•			•		•			•	•
Michelle Maloney	Marine Mammal Biologist	•	•			•	•	•	•	•	•			•	•	•			•	•	•
Robert Marszalkowski	Senior Engineering Lead (HDD)	•			•	•				•		•			•						•
Sean Maxwell	Senior Marine Fisheries Biologist	•	•					•	•	•	•	•		•	•	•				•	
Ryan McCarthy	Senior Marine Scientist/Project Manager				•			•	•	•		•	•	•	•	•	•			•	
Tim O'Sullivan	Senior Wildlife Biologist				•			•	•	•		•					•			•	
Nancy Palmstrom	OSW Project Manager	•	•	•	•	•		•	•	•	•	•		•	•	•	•			•	•
Adam Parker	Marine Archaeologist	•	•	•	•				•			•				•		•			
Morgan Paris	Marine Fisheries Biologist						•					•	•	•		•	•				
John Qoyawayma	3d Visualization Specialist	•					•	•		•											
John Rollino	Senior Terrestrial and Fisheries Biologist	•			•			•	•	•		•				•		•		•	
Andrea Rosenthal	Permitting and Environmental Impact Assessment Program Manager				•			•	•	•	•	•		•	•		•		•	•	
Brian Stormwind	Senior Air Quality Specialist	•	•	•	•			•	•	•	•	•	•		•	•			•	•	•
Carl Tammi, PWS	OSW Program Director	•	•	•	•	•		•	•	•	•	•		•	•		•		•	•	
Paula Winchell	Marine Benthic Scientist	•			•		•	•	•	•	•	•		•	•	•	•			•	•
Marjorie Zeff, PhD	Senior Marine Geologist	•			•				•	•	•	•		•						•	•
Rick Zeroka	OSW Program Manager	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•			•	•



KEY STAFF BIOS

Offshore Wind



DAWN

MacDonald

Global OSW Market Sector Lead

Dawn MacDonald is a professional engineer with over 20 years of project management experience, including 15 years in the energy sector. Over the past six years Dawn has provided critical technical oversight for multiple European offshore wind projects in development, construction, and operations. During this time, she's played significant roles including:

- EPCI contractor selection and commercial negotiations,
- Environmental impact assessments, consenting issues and evaluation of regulatory change
- Construction issues and interface planning
- LCOE assessment, program development, risk management and scenario planning,
- Investment decisions (including development / assessment of relevant technical assumptions)
- Operational issues and planning.

Additionally, Dawn has held leadership roles in offshore wind leasing competitive processes and the evaluation of investment opportunities within the offshore wind sector and across the broader energy sector.

Prior to her focus on the offshore wind sector, Dawn led a dedicated team in Calgary, Alberta responsible for the technical development of energy sector mega projects and evaluation of investment opportunities



NATHAN

Henderson, CFP

National Offshore Program Leader

Nathan Henderson is an Associate Vice President and Senior Certified Fisheries Biologist with over 24 years of experience who specializes in aquatic biology and permitting. Nathan has extensive experience with offshore and coastal permitting, sediment remediation, dredging, marine ecology, fisheries biology, fish behavior, aquatic habitat restoration, and water quality. Currently, Nathan is the Deputy Project Manager of a Massachusetts Offshore Wind Project assisting with the development of the Construction Operation Plan and leading the technical volume components including fisheries, visual assessment, sediment transport, marine mammals, and marine geology. He has years of experience managing multidisciplinary projects, including environmental impact assessments, compliance and permitting, and environmental remediation projects. Nathan has managed a variety of projects including assisting Eversource with environmental permitting for the installation of a new submarine cable that is the primary power source to Massachusetts Water Resources Authority's Deer Island Wastewater Treatment Plant. Nathan has been involved in various components of offshore wind development including the development of New York State Energy Research and Development Authority's Offshore Wind Strategic plan focusing on Supply Chain development and he was the Principal for Aqua Ventus offshore wind project routing the location of the submarine cable to shore.



MARLIN

Peterson

Port Facilities and Vessels

Marlin Peterson has more than 30 years of port, maritime, and waterfront infrastructure planning, design, and project/construction management experience. His extensive experience comprises concept planning and feasibility studies through environmental assessment and permit application(s), design development, procurement, dredge material management, in-water and upland construction, and operational readiness. His project experience includes national and international locations, such as the U.S. eastern seaboard, the Gulf of Mexico, the Caribbean, the Mediterranean, and the Middle East.

Marlin's specific responsibilities encompass team building, budgeting, schedule, and contract management. Additionally, he leads design-bid-build and alternative procurement delivery, quality, constructability and value engineering reviews, design/build coordination, stakeholder engagement, grant application and reporting, and Owner-Controlled Insurance Programs implementation. For the past 10 years, he has been engaged with the OSW industry through management of the Paulsboro Marine Terminal redevelopment, which is now EEW's Northeast U.S. monopile fabrication facility. He also assisted with the development of New Jersey's initial Offshore Wind Renewable Energy Certificate program.



KEY STAFF BIOS

Offshore Wind



NANCY Palmstrom
OSW Project Manager

Nancy Palmstrom is a Program Manager with more than 30 years of experience in environmental permitting (coastal zone management, freshwater and coastal wetland, flood hazard, Section 401 Water Quality Certification, USACE Section 404/10, county and local planning, interstate agency, NPDES/stormwater, NPDES/ wastewater, construction dewatering) as well as expertise in aquatic resource assessment and restoration, and stormwater management. Nancy is currently the Project Manager for a Massachusetts offshore wind COP for a confidential client. She is an experienced program manager, and has managed environmental permitting for a wide range of projects in New Jersey, New York, and other locations throughout the northeastern U.S. She has also served as project/permitting manager for a number of transmission and distribution projects. Nancy has significant experience with NPDES permitting including new permits, renewals, and modifications.



KRISTEN Durocher
OSW Project Manager

Kristen Durocher is a senior ecologist with 30 years of experience working in offshore environments. She has served as deputy project manager for a major offshore wind project in the Northeast. In support of that project, she led the effort for the benthic, seagrass, and essential fish habitat technical reports. She has extensive experience in the field of ecological assessment of contaminated sites and specializes in sediment and surface water investigations and ecological assessment, integrating multiple lines of evidence including aquatic and benthic ecology data, laboratory and in situ toxicity testing, and chemistry data. Kristen has applied this knowledge and practical experience with complex systems and ecology to the offshore wind development market. She has proven skills to manage large projects with multiple disciplines. Kristen has designed and managed multifaceted field programs that are based on sound statistical design that deliver clients with data that can be used to establish baseline conditions, satisfy trend-based hypothesis testing, or make determinations of impact.



CHRISTINE Archer
Senior Environmental Scientist

Christine Archer is a senior environmental scientist with over 25 years of experience working in offshore and coastal evaluations of sediment and water quality. She has extensive experience in ecological risk assessment, environmental toxicity testing, dredged material evaluation, and aquatic field sampling. Christine manages and interprets aquatic and terrestrial toxicity and bioaccumulation testing programs for many dredged material evaluations and ecological risk assessments and uses those results as part of multi-disciplinary investigations to determine the suitability of material for offshore disposal or the need for remedial action for contaminated sites. She has recently supported the development of the Construction and Operations Plan for a major offshore wind project in the Northeast. Her support of that project has included regular coordination meetings with the developer, serving as task lead for several sections of the COP, and coordinating with SMEs on the completion of COP sections and appendices. She also supported the development of the Site Assessment Plan and related compliance submittals.



HEATHER Brewster
OSW Project Manager

Heather Brewster has been with AECOM for 25 years where she manages complex capital projects across several sectors, primarily within oil and gas and more recently in the solar and offshore wind renewables sector. She is experienced with working through multi-tiered permitting with federal and states agencies as well as the National Environmental Policy Act process with both the Federal Energy Regulatory Commission for 7(c) Projects and the Bureau of Ocean Energy Management (BOEM) for the development of offshore Lease Areas.

Heather has managed greenfield projects from inception starting with project siting/permit feasibility/constraints analyses assessments and ultimate site selection, transitioning to execution of surveys for natural resources/cultural/rare, threatened and endangered species efforts and consultations, then through federal and state permitting and completion of necessary mitigation needs, construction support for permitting compliance, wetland restoration monitoring and agency reporting (for upwards of 5 years), and ending with agency permit close-out efforts. She understands the steps and challenges to be managed and executed during the different life stages of a project.

Heather is currently supporting Equinor with their Beacon Wind Project and completion of studies for their Lease Area OCS-A 0520 and proposed landfall locations in New York and Connecticut. Within 2022 the project submitted its Construction and Operations Plan and three subsequent filings to address agency comment and project maturation for changing project components. She manages the execution of scope across eighteen subject matter experts and five subcontractors for the studies and reporting required for inair and underwater noise, air emissions, terrestrial and marine cultural resources, historic properties, visual impacts, marine mammals, avian and bat assessments, sediment transport and scour analysis, and benthic and essential fish assessments.



KEY STAFF BIOS

Offshore Wind



**RICK
Zeroka**

OSW Program Manager

Richard (Rick) Zeroka, the AECOM Offshore Wind Permitting Program Manager, has over 30 years of experience. His experience includes development, implementation, and management of regulatory strategies and technical aspects of large interdisciplinary energy and development projects. Rick also has significant experience in National Environmental Policy Act documentation, environmental permitting, biological assessments, water quality, coastal and estuarine processes, and dredged material disposal management. Rick authored a permitting and regulatory business strategy for new offshore wind (OSW) developer's interaction with U.S. offshore wind clients. He authored an Insight article for OSW clients titled U.S. Offshore Wind Permitting: the SAP, the COP, and the Regulatory Process in Between (short and long version) and co-authored a second Insight article titled Offshore Wind Environmental Compliance: Planning Ahead. He has managed and assisted with BOEM COP documentation and 3rd-Party Environmental Impact Statements for offshore wind farms along the Atlantic OCS. Specifically, Rick was the co-manager and lead author for Deepwater Wind's COP for the South Fork Wind Farm and South Fork Export Cable offshore wind energy facility project on the Atlantic OCS. He served as a Senior Technical Consultant for most COP sections and served as Resource Task Lead for coastal land use and infrastructure and other marine uses. Rick coordinated determination submittals to coastal zone management programs in New York State, Rhode Island, and the Commonwealth of Massachusetts, and coordinated resource section development, technical editing, and compiling of over the 10,000-page COP submittal to Deepwater Wind. He also assisted with data gathering, analysis and reporting, and data gap analysis.



**TOOMBS
Denise**

Senior Environmental Program Manager

Denise Toombs has extensive experience managing complex, controversial capital projects that include front-end siting and permit feasibility/constraints analyses, coastal/ marine permitting strategy and execution, managing impact assessments and subject matter experts, and agency liaison and negotiation related to permit conditions. She has managed impact analyses compliant with CEQA, NEPA and relevant requirements in other states and countries. She has managed environmental impact assessments for private clients as well as in a third-party capacity. On permitting projects, she acts as an agent on behalf of commercial clients, and as a liaison between commercial and public sector interests. She has years of experience in coastal and marine projects, assisting clients with seabed easements and permissions from the coastal zone through the exclusive economic zone.



**SCOTT
Salmon, LEEP AP**

Transmission Siting and Permitting SME

Scott Salmon is an energy and transmission siting and permitting Subject Matter Expert with more than 16 years of progressively responsible experience in environmental consulting supporting regulated utilities and merchant generation and transmission developers. Scott has functioned as lead SME and Project Manager on numerous energy and transmission projects involving siting evaluations, constraints analysis, alternatives analysis, Siting Council and Public Utility Commission Applications, and various state and federal environmental permitting programs. He has led cross-disciplinary project teams on multiple Article VII filings for electric transmission facilities pursuant to the New York Public Service Law. Scott has extensive experience in the management of environmental review processes, in the production of environmental planning documentation, and the permitting of waterfront utility projects including Section 10/404 permitting associated with Army Corps Jurisdictional Waters of the U.S. He is currently serving as task lead on multiple sections of a Construction and Operations Plan for an Offshore Wind Project in the Massachusetts WEA.



**MICHELLE
Maloney**

Marine Mammal Biologist

Michelle Maloney is a marine mammal biologist and natural resource specialist with a focus on coastal and marine natural resources management. Michelle has been assisting a confidential offshore wind project in strategy development for site assessment and characterization, including an Incidental Harassment Authorization (IHA). She is also leading a military readiness IHA, and a subsea cable permit compliance survey which includes marine mammal mitigation. Her key project experience includes Marine Mammal Protection Act permitting and compliance, Endangered Species Act permitting, permitting, and licensing of electric utility projects, NEPA documents, and biological technical reports. Michelle is a certified Protected Species Observer and has spent extended time at sea. She is also a certified Rescue SCUBA Diver. She has experience identifying marine species in the field, conducting fisheries surveys, marine mammal, and protected species observation, and analyzing data. Michelle holds a master's degree in Marine Conservation from Scripps Institution of Oceanography, for which she completed a research project on marine mammal acoustics.





MORE INFORMATION

Nathan Henderson

Vice President,
National Offshore Program Leader
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