

Wind & Solar

Renewable Energy

About AECOM

AECOM designs, builds, finances, operates, and manages projects and programs that unlock opportunities, protect our environment and improve people’s lives.

As an integrated global network, AECOM works with clients, communities, and colleagues to develop and implement innovative and cost-effective solutions to the world’s most complex challenges.

AECOM provides the full range of planning, permitting, engineering, environmental and design services for all types of traditional and renewable energy projects across the U.S. and Canada.

Meeting these challenges requires a fully integrated engineering and construction services organization with the capabilities to support the entire project in a holistic manner – from inception through construction, operations and maintenance, to decommissioning and closure.

2021 ENR

Engineering News-Record’s surveys again recognize AECOM as an industry leader in many important categories.

- #1 Environmental Engineering/Design
- #1 Environmental Science
- #2 Chemical and Soil Remediation
- #2 Design Firm
- #2 Site Assessment and Compliance
- #2 Wastewater Treatment
- #2 Water
- #2 Water Supply
- #3 Environmental Firm
- #3 Hazardous Waste
- #3 Sewer and Waste
- #3 Wastewater Treatment Plants
- #4 Environmental Management

49,000+

employees globally

24,000

employees in North America

7

continents

\$13.3B

revenue in FY21

Powering Energy

AECOM supports energy projects across North America with the full range of planning, permitting, engineering, environmental and design services.

With experience that spans more than 100 years and 150 countries, AECOM has conceived, planned, and built energy projects of every type and size.

AECOM's combination of **global experience** and integrated technical capabilities deliver **strategic solutions** that improve and modernize infrastructure, enhance sustainability and resiliency, and benefit the community.

AECOM has engineered and/or constructed more than 280,000 MW of electricity worldwide — equivalent to approximately **one fourth of the generating power** in the U.S. today.

We provide a single source for multidisciplinary engineering, environmental, and management services. From international and domestic market analysis, to siting and permitting, through final project development and execution, we develop, design, and construct projects that enhance infrastructure, reduce energy and water consumption, and produce power from traditional and renewable sources.

Our understanding of the big picture — such as the interconnection between generation, transmission, storage, grid improvements, conservation, and efficiency — allows us to deliver a holistic energy strategy tailored specifically to our clients' needs.

AECOM brings to our clients tailored strategic services that include:

- Technology neutral
- World-class innovation
- Proven tools & processes
- Current industry & regulatory knowledge
- Global technical practice network
- Deliver projects on schedule & on budget

Full renewables capabilities:

- Biomass & geothermal
- Wind
- Solar
- Hydroelectric generation



AECOM has helped deliver more than 50 GW of renewable power globally.



AECOM has supported clean energy projects in almost every US state and Canadian province and territory, including more than 300 solar and wind projects since 2015.

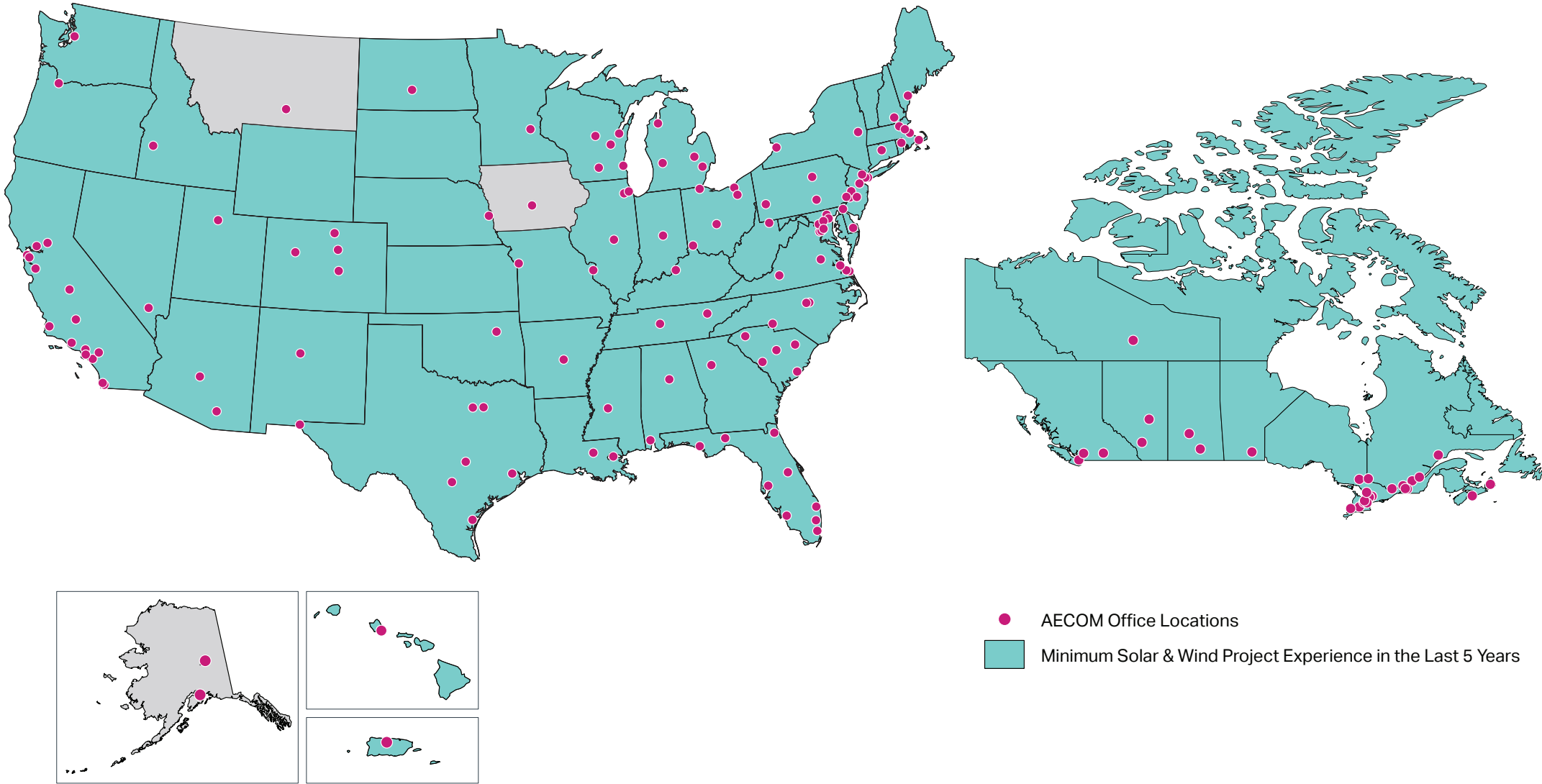
Global experience, local expertise

As a strategic client partner, we provide project planning, design, and permitting support to successfully site project and obtain necessary development approvals.

- Energy analysis and planning
- Siting/due diligence
- Environmental permitting/compliance
- Public outreach
- Conceptual design
- Detailed design
- Engineering
- Procurement
- Project management

As program/construction manager, we implement proven project controls to successfully manage efforts large and small to keep projects on schedule and budget.

- Project scheduling
- Estimating
- Cost control
- Document control
- Risk management
- Compliance management
- Forecasting
- Asset management
- Owner’s engineering services
- Construction management



Some of our clients include: Long Island Power Authority ▪ Public Service Electric & Gas Company ▪ Noble Wind Farms ▪ Pattern Energy ▪ Hydro-Québec ▪ New York Power Authority ▪ Los Angeles Department of Water and Power ▪ BC Hydro National Grid ▪ Florida Power and Light (NextEra) ▪ SaskPower ▪ Southern Power Company ▪ U.S. Department of Energy ▪ U.S. Army Corps of Engineers ▪ all branches of the U.S. military and many other similar agencies, firms, and municipalities.

A customized approach to project delivery, with comprehensive support from idea to operation.

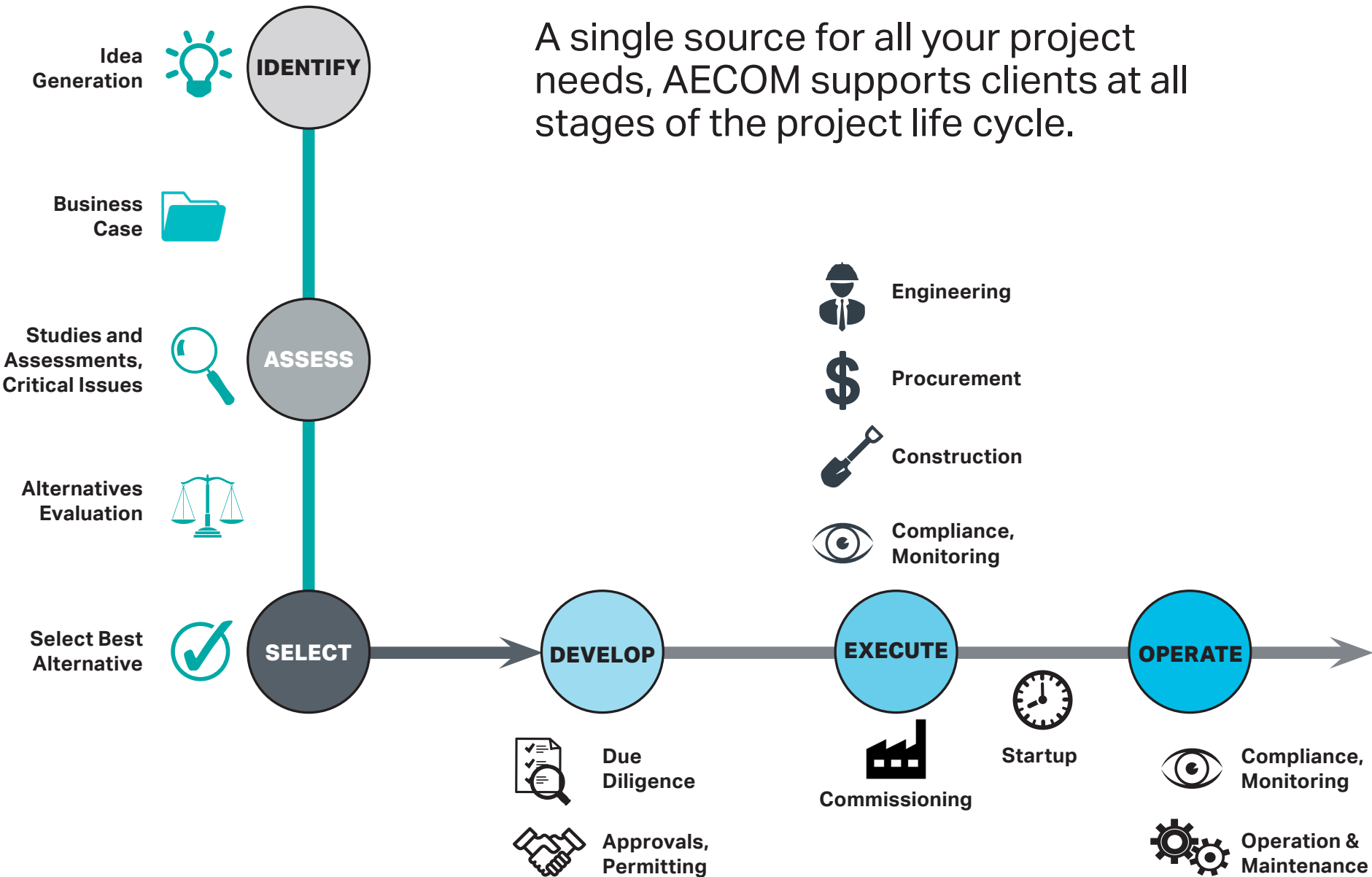
Understanding each client's unique conditions and project requirements is central to identifying the most appropriate approach for project delivery.

Proven experience with alternative delivery to fit owner's objectives, timelines and constraints:

- Public-private partnerships (P3)
- Design-Build
- Integrated project delivery
- Construction management-at-risk

"Our staff was impressed with the quality of the work and how AECOM has gone beyond what is expected. AECOM performed at a very high level of professionalism, and I'm very impressed with their troubleshooting, communications, organization and planning of all aspects of the project."

*U.S. Navy's Space and Navy Warfare Systems
Command Systems Center Pacific (SPAWAR),
Performance Evaluation*



Using integrated project management and technical resources, AECOM plans, develops, and executes environmental review and permitting, engineering design, procurement, construction, and commissioning for energy projects around the world.



AECOM also provides a variety of alternative delivery approaches to match the needs of each project and client.



Assessments and front-end studies

- Site selection, siting studies
- Conceptual design, system sizing
- Grid interconnections
- Risk and critical issues analysis
- Feasibility studies
- Alternatives evaluations
- Social impact assessments
- Financial models
- Economic benefit assessments
- Efficiency improvements
- Wind resource, solar radiance assessments



Planning and Permitting

- Project/resource planning
- Life cycle analysis
- Risk and hazard assessments
- Baseline environmental surveys
- Resource studies and assessments
- Environmental compliance
- Public/stakeholder outreach
- Equipment selection, sizing, and specifications
- Preliminary design
- Utility requirements



Detailed Engineering

- Civil, electrical, environmental, geotechnical and structural engineering
- Construction/as-built drawings
- Instrumentation, controls electrical collection, and Supervisory Control and Data Acquisition (SCADA)
- Substation/grid connection



Procurement

- Commercial terms and conditions
- Bid package preparation
- Contractor pre-qualification
- Bid solicitation and analysis
- Pre-bid meetings
- Purchasing and expediting
- On-site and source inspections



Construction

- Value engineering
- Constructability review
- Technical reliability and viability review
- Construction management
- Design/build services
- Inspection
- Commissioning
- Compliance/monitoring
- Worker awareness training
- Groundwater monitoring



Commissioning

- Testing procedures
- Startup planning
- O&M manuals
- On-site inspection
- Test data analysis



Management & Operations

- Troubleshooting, optimization, consultation
- Site management
- Safety, health, and environmental management
- Project reporting and stakeholder management
- Contract management
- Compliance/monitoring

OptiSite Siting Program delivers successful renewable developments

AECOM's OptiSite Siting Program helps clients develop successful renewable energy projects through a detailed site selection assessment. This collaborative process helps clients select the best site to achieve project goals while helping reduce mitigation and permitting requirements.

Our **THREE-PART PROCESS** defines potential geographies, identifies client goals and objectives, and excludes fatal flaws to develop client-focused results.

TIER 1 integrates a GIS-enabled regional assessment to evaluate screening criteria at a broad level to determine the most suitable areas for renewable energy development.

TIER 2 applies a more in-depth study that applies weighted modeling of siting criteria – such as solar intensity, slope, geology, land ownership, sensitive ecological features, proximity to existing infrastructure, and other constraints or resources – to discern sites most suitable for renewable energy facilities.

TIER 3 emphasizes individual site characterization and further focuses on aspects that would ultimately impact the potential for energy generation, such as resource development costs, construction requirements, permitting constraints, viewshed analysis, potential impact, and benefits to the community.

A different kind of energy services company

AECOM's ability to deliver customized energy services is unmatched. We are the only global planning, engineering and construction management firm accredited by the National Association of Energy Service Companies (NAESCO).

With superior technical and management skills, our engineers, scientists, planners, and construction specialists provide clients customized solutions based on:

TECHNOLOGY NEUTRALITY. As an unbiased technology integrator, we do not manufacture equipment; instead, using equipment that best-fits our clients needs.

INNOVATION. Our technical practice network connects subject matter experts from around the world for innovative solutions to today's most challenging issues.

PROVEN TOOLS AND PROCESSES. In-house and third-party tools for planning, equipment sizing, design, and project management, including safety and quality, deliver efficient and cost-effective project implementation and management.

DEEP INDUSTRY KNOWLEDGE. Engineers, scientists, and technologists are selected for projects based on their in depth knowledge and expertise in a particular sector and geography to provide excellent service.

Solar

AECOM's design-build services delivered 1.9 MW of solar generation at schools in the San Diego Unified School District.

From initial planning to final development and execution, AECOM's integrated services deliver utility-scale to distributed solar power generation systems.

With broad solar experience, proven project controls, and customized delivery options, AECOM delivers successful solar projects.

AECOM has been involved in some of North America's largest projects, and we are currently working with many of the world's foremost solar energy developers, manufacturers and leading solar-adopting utilities and government entities on solar power generation facilities.

Environmental planners and scientists provide global knowledge at the local level to facilitate projects through complex siting and permitting efforts.

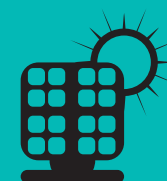
Experienced staff provide strategic agency and stakeholder guidance to efficiently navigate environmental review processes and minimize compliance and compensatory obligations.

As a leading full-services provider for solar, we provide:

- Full-service engineering, consulting and construction phase services
- Flexible contracting options: owner's engineer, EPC, or design-build
- Environmental siting, permitting, and compliance

Our comprehensive environmental services include:

- Critical Issues Analyses
- Site Characterization Studies
- Biological Resource Assessments (wildlife, vegetation, wetlands)
- Cultural Resource Assessments including tribal/aboriginal outreach
- Air, soil, noise, and traffic studies
- Water resources (hydrology, storm water, groundwater)
- Socioeconomics studies and modeling
- Glint-glare analysis
- Visual simulations and impact assessments
- Technology-specific evaluations
- Permitting
- Stakeholder outreach
- Compliance monitoring



AECOM has helped deliver more than 15 GW in solar power around the world.

Wind

AECOM's environmental services supported development of the 551 MW Cedar Creek Wind Farm in Weld County, Colorado.

Comprehensive planning, design, environmental, and construction services provide clients with a **single source for wind energy developments worldwide.**

AECOM's integrated services seamlessly deliver wind developments of all sizes.

AECOM is equipped to meet today's challenges with generating and transmission facilities and prepared for the changes ahead.

We have delivered hundreds of wind energy projects and effectively navigate complex project approval processes.

With a broad range of technical resources and project management services, we thoroughly plan, develop and execute:

- Critical Issues Analyses
- Site Characterization Studies
- Environmental Permitting
- Engineering/Design
- Procurement
- Construction Services

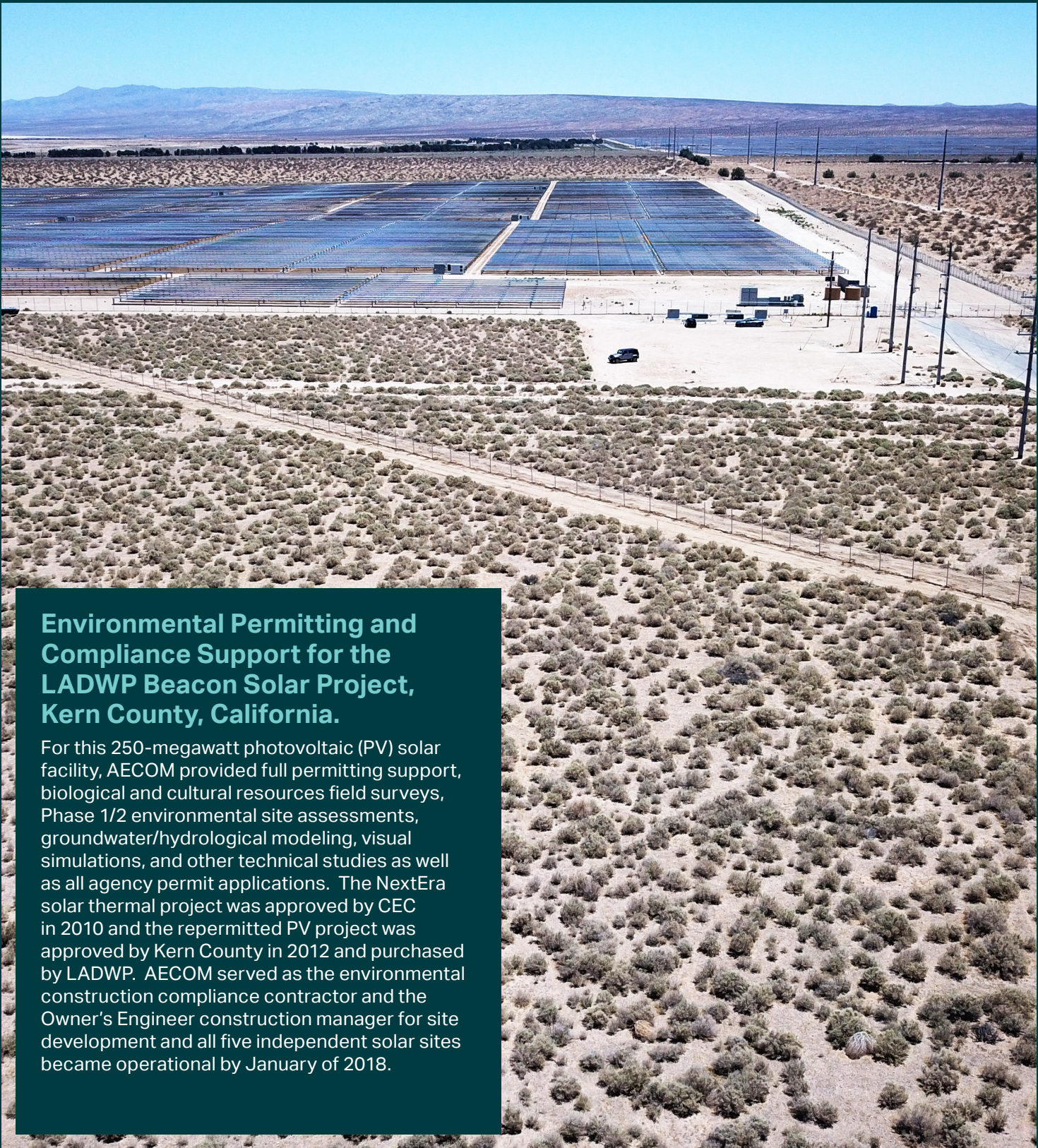
We provide strategic support to facilitate siting, permitting and approvals of small and large-scale wind developments, both onshore and offshore.

Comprehensive services include:

- Biological Resource Assessments (wildlife, vegetation, wetlands)
- Cultural Resource Assessments including tribal/aboriginal outreach
- Air, soil, noise, and traffic studies
- Water resources (hydrology, storm water, groundwater)
- Socioeconomics studies and modeling
- Shadow flicker
- Visual simulations and impact assessments
- Technology-specific evaluations
- Permitting
- Stakeholder outreach
- Full-service engineering/consulting
- Construction-phase services
- Owner's engineer
- Design engineer

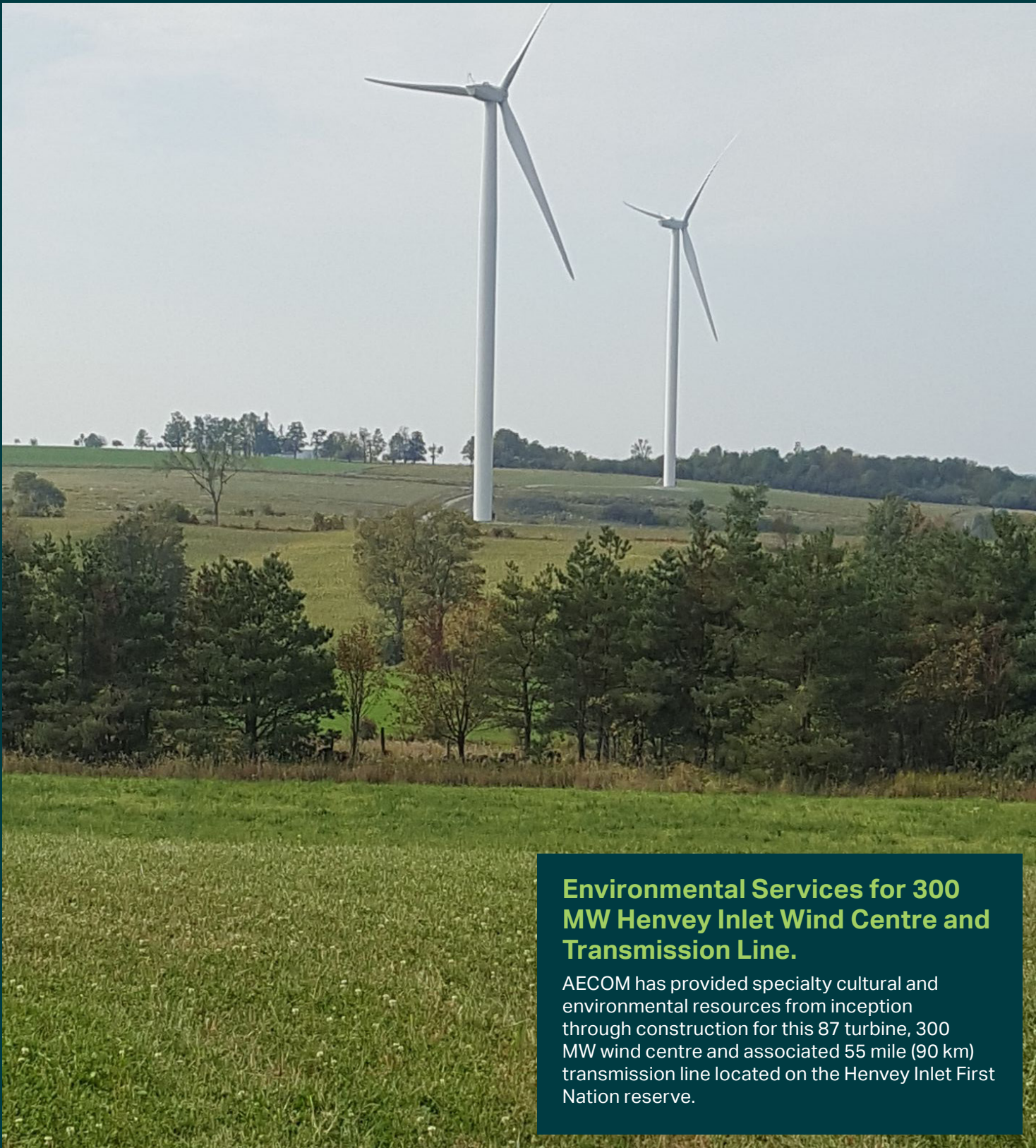


AECOM has helped deliver more than 35 GW in wind power around the world.



Environmental Permitting and Compliance Support for the LADWP Beacon Solar Project, Kern County, California.

For this 250-megawatt photovoltaic (PV) solar facility, AECOM provided full permitting support, biological and cultural resources field surveys, Phase 1/2 environmental site assessments, groundwater/hydrological modeling, visual simulations, and other technical studies as well as all agency permit applications. The NextEra solar thermal project was approved by CEC in 2010 and the re-permitted PV project was approved by Kern County in 2012 and purchased by LADWP. AECOM served as the environmental construction compliance contractor and the Owner's Engineer construction manager for site development and all five independent solar sites became operational by January of 2018.



Environmental Services for 300 MW Henvey Inlet Wind Centre and Transmission Line.

AECOM has provided specialty cultural and environmental resources from inception through construction for this 87 turbine, 300 MW wind centre and associated 55 mile (90 km) transmission line located on the Henvey Inlet First Nation reserve.

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of \$13.3 billion in fiscal year 2021.

See how we are delivering sustainable legacies for generations to come at aecom.com and [@AECOM](https://twitter.com/AECOM).

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