



Comprehensive renewable energy solutions

ENVIRONMENTAL SERVICES FOR WIND ENERGY





We've got the environment down to a science

We recognize that your wind project's environmental needs are varied and complex, and we believe the best solution is to choose an environmental services consultant who understands these challenges and will work in partnership with you to creatively and efficiently implement solutions. We pride ourselves on being recognized for providing some of the best environmental services to the North American wind energy industry. Our over 2,700-person environmental team includes senior professionals from across environmental disciplines, and our 250-plus offices in North America means that we have a local understanding of your project and the community it serves.

With decades of experience providing environmental services to wind energy clients, Stantec offers a wealth of technical knowledge and a strong understanding of federal, state, and local regulations. Our team specializes in life-cycle services for the wind industry – from planning and siting to operation and maintenance, Stantec offers the expertise to bring your project from concept to completion.



2,700

environmental services staff
throughout North America





Our commitment to safety

Stantec is committed to providing and maintaining an incident-free, healthy and safe workplace. At Stantec, we believe in doing what is right which includes sending our people home injury-free every day. Through our Health, Safety, Security, and Environment Program, Stantec employees are committed to:

- Complying with client health and safety requirements at all times when working on project sites.
- Identifying, assessing, and managing the environmental aspects and impacts associated with the services and products we provide.
- Identifying and managing the health, safety, security, and environmental risks and hazards to which our employees are exposed.
- Assisting our employees to develop an awareness and understanding of the health, safety, security, and environmental issues relevant to their work.
- Complying with legislation, regulations, and appropriate industry standards.
- Monitoring and enhancing the program through inspections, audits, reviews, investigations, corrective actions, and other processes.
- Facilitating communication regarding health, safety, security, and environmental issues.

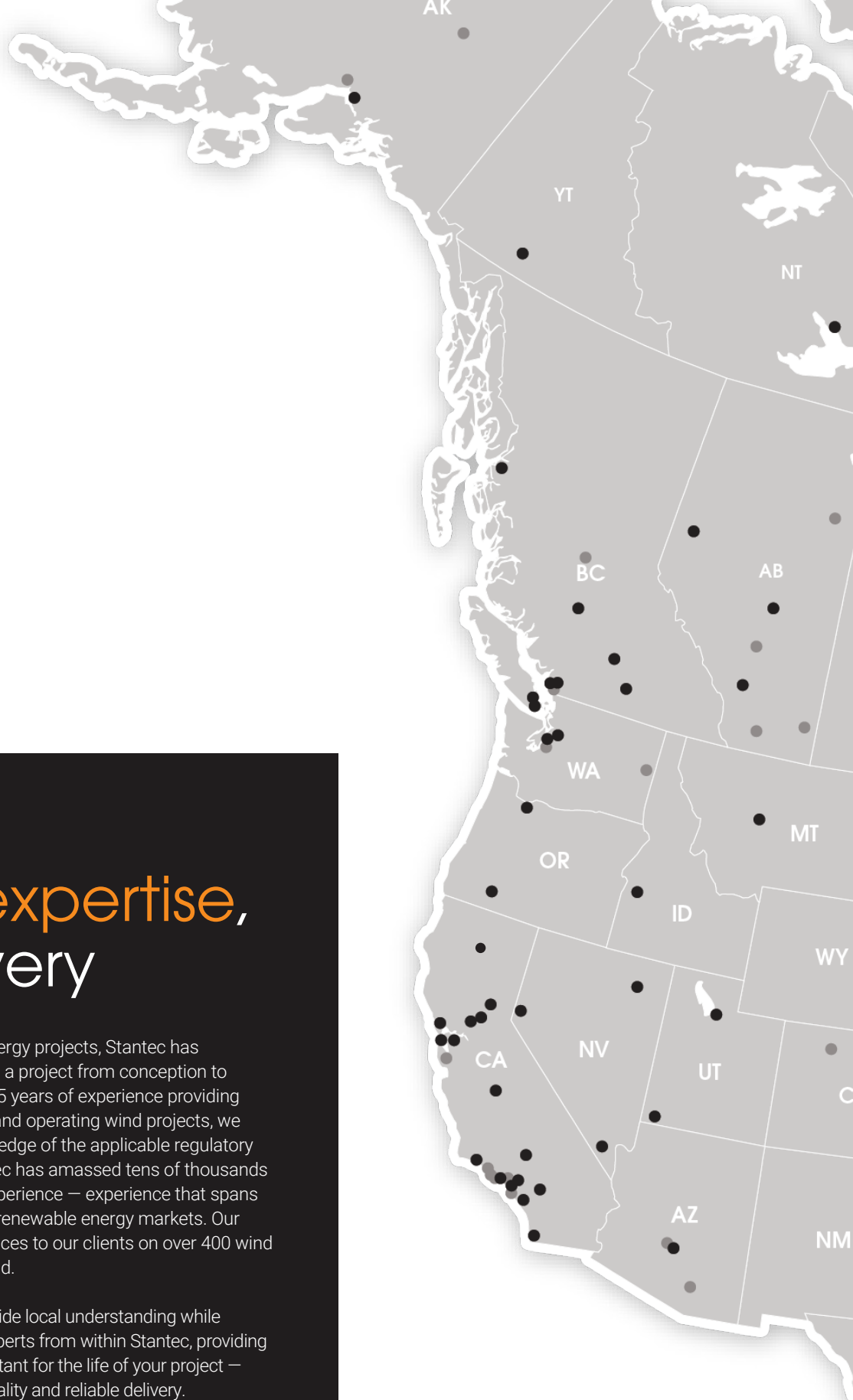
Our Health, Safety, Security, and Environment Program applies to anyone employed by Stantec including employees, consultants, contractors, subcontractors, and suppliers working within Stantec workplaces

At Stantec, we make safety a pillar in our company culture and incorporate it into all aspects of our business. Our team continually strives to improve the safe and efficient manner in which we execute our work. Stantec's commitment to health and safety is integrated into all aspects of our business.

National **expertise**, local delivery

When it comes to utility-scale wind energy projects, Stantec has the capacity and experience executing a project from conception to construction, and beyond. With over 25 years of experience providing environmental services for proposed and operating wind projects, we make it our business to use our knowledge of the applicable regulatory drivers to advance your project. Stantec has amassed tens of thousands of megawatts of renewable energy experience — experience that spans the North American and international renewable energy markets. Our staff has provided environmental services to our clients on over 400 wind projects — you could say we know wind.

What sets us apart is our ability to provide local understanding while drawing on an international team of experts from within Stantec, providing you with a single environmental consultant for the life of your project — experience that provides consistent quality and reliable delivery.





- Stantec Office Location
- Stantec Environmental Services Office Location

Wind energy services at every stage

PLANNING & SITING



- Due diligence review support
- Grid system integration studies
- Critical issues analysis
- Regulatory planning and support
- Schedule and budget risk analysis and mitigation
- Stakeholder outreach
- Resource assessment
- Feasibility studies
- Risk analysis
- Electrical studies
- Preliminary site/array layout

REGULATORY SUPPORT & PERMITTING



- Strategic regulatory facilitation
- Habitat and rare species surveys
- Cultural resource evaluation
- Biophysical assessments and surveys
- Visual impact assessment
- Project alternatives analysis
- Mitigation plans
- Federal, State/Provincial and local permitting
- NEPA compliance documentation
- Public, agency, and Tribal/Aboriginal consultations
- Expert testimony

DETAILED ENGINEERING & DESIGN



- Civil
- Structural
- Mechanical
- Geotechnical
- Grounding
- Electrical, DC and AC collection
- Instrumentation and controls
- SCADA
- Stormwater management
- Equipment selection
- Protection and control
- MV/HV substations
- Reactive power control

PROJECT & CONSTRUCTION MANAGEMENT



- Site observation
- Cost controls
- Scheduling
- Construction progress
- Independent engineering review
- Resource delineation
- Environmental compliance training and monitoring
- Regulatory agency coordination
- Habitat restoration
- Best management practice design

START-UP, COMMISSIONING, & TESTING

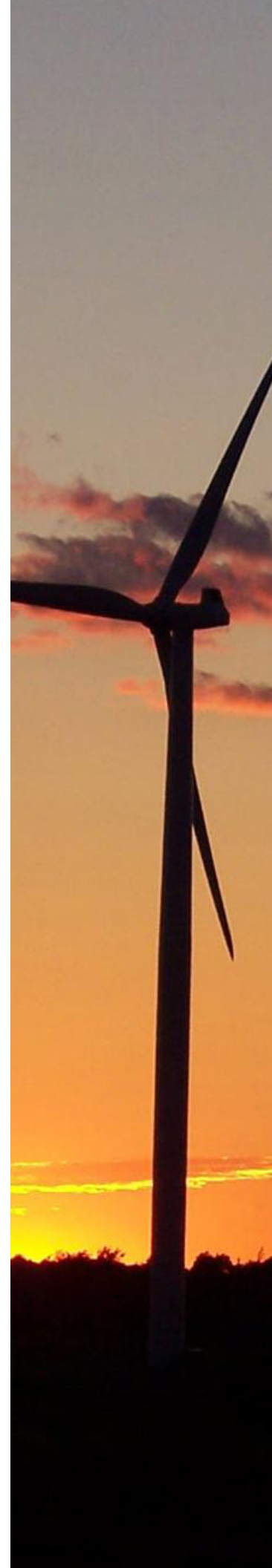


- System turnover & checkout functions
- Equipment, system, and plant testing
- Grid connection
- O&M programs
- Performance testing
- Noise audits

OPERATIONS & MAINTENANCE



- Wildlife & fisheries impact monitoring
- Permit compliance & close-out
- ROW vegetation management
- Avian protection planning, training, and management
- GIS infrastructure inventory





Wind energy lifecycle

PLANNING & SITING

REGULATORY
SUPPORT &
PERMITTING

DETAILED
ENGINEERING &
DESIGN

PROJECT &
CONSTRUCTION
MANAGEMENT

START-UP,
COMMISSIONING, &
TESTING

OPERATIONS &
MAINTENANCE

DECOMMISSIONING &
REPOWERING

400+

Wind projects
we've provided
environmental services
for across the US.




Our roadmap to success

Stantec has long-standing relationships with state and federal agencies across the US. We work with developers in coordination with the resource agencies to design and implement environmental surveys that will be accepted and that make the most sense based on the questions being asked, with cost efficiencies in mind.

In addition to our rigorous technical and document preparation capabilities, Stantec is ISO 9001:2008 certified, confirming that quality control and assurance is part of each project. Stantec also implements a Project Management Framework to ensure that managers are organized and consistent from project initiation, to planning, control, and close-out.

We have developed a technical approach that draws upon our project team's extensive experience conducting surveys at wind projects. We also provide a regulatory approach that builds on the technical analysis to provide permitting support throughout the project development process. The key issues for successful project development and permitting include both schedule and resource management. Stantec manages these issues through a combination of seasoned project managers, regulatory analysts with extensive permitting experience, and skilled scientists with appropriate renewable energy experience. Stantec's roadmap to a successful project implementation is summarized below.

ISSUE OF FOCUS	CONTROL STRATEGY
<p>Technical approach that is scientifically sound, reasonable, and legally defensible</p>	<p>Establishment of clear and concise survey goals and objectives</p> <p>Early identification of survey metrics designed to meet the project objectives</p> <p>Early development of a rigorous survey plan</p>
<p>Technical strength necessary to address key issues identified by agencies and the public</p>	<p>Selecting the right project team at the inception of the project, with robust technical capabilities, the capacity to handle multiple surveys at the same time, and extensive permitting experience</p>
<p>Production of high-quality documentation in compliance with permitting agency expectations</p>	<p>Stantec is committed to the philosophy that quality products result from quality planning, design, and work performance by skilled and experienced professionals. Production of high quality products will be achieved by:</p> <ul style="list-style-type: none"> • Quality assessment through senior oversight and review • Self-Review and Independent Audits: Self-review is conducted by each project team member to confirm that the work they have completed is correct; Independent audits of key tasks to ensure self-reviews occur • Technical Reviews of Project Deliverables: Peer review conducted by staff who do not have direct responsibility for the report
<p>Effective communication with our client and other team members</p>	<p>Project managers with extensive wind energy experience who understand the unique needs of the development process</p> <p>Development of a clear scope of work and schedule for each project, and task, identifying responsibilities and milestones</p> <p>Regular communication between the client, Stantec, and partners</p>
<p>Monitoring and control of overall project costs</p>	<p>Use of local staff – key to efficiencies in both mobilization and costs</p> <p>Maintaining key staff throughout each project</p> <p>Timely receipt of project information</p>

An aerial photograph of a wind farm situated in a forest with vibrant autumn foliage. Two large white wind turbines are visible, standing tall against the colorful trees. The scene is captured from a high angle, showing the layout of the turbines and the surrounding landscape. The colors range from bright yellows and oranges to deep blues and greens, indicating a mix of deciduous and evergreen trees.

The best solutions are created when we work together

We're proud of our contribution — we're providing the energy the world needs for today and tomorrow and creating lasting connections with our clients and communities.