

Renewable Resources Energy



gai consultants®



Transforming
Ideas for the
Energy We Use

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Renewable Resources

Focused on Your Goals

Since 2008, wind power capacity has almost tripled in the U.S. to 60 gigawatts, or enough energy to power 15 million homes every year. With continued technology improvements and policy support, the Department of Energy estimates that as much as 20% of projected U.S. electricity demand could be met by wind power by 2030. GAI is participating in this growth by providing comprehensive, responsive, and professional siting, design, and permitting services for wind, solar, bio-mass, and hydro projects. Our services include mapping; modeling; permitting; environmental assessment and compliance; civil, electrical, mechanical, and structural design; and construction monitoring.

As demand for renewable energy continues to grow, GAI is dedicated to helping you meet your needs and goals. Your goals are important. And if it's important to you, it's important to us.

100+

GAI has provided solutions for
over 100 renewables projects.



We find complete solutions.

What Distinguishes GAI

- Having worked in the renewable energy industry since its reemergence—the history, knowledge, and expertise that clients trust to make their projects a success
- The understanding that clients need to act quickly when an opportunity becomes a project, and the response that gets projects moving as soon as possible
- Experience in electric power generation and transmission that is an advantage in understanding required permitting protocols and established industry practices
- Dedicated technical teams that work seamlessly to support every project from planning through operation
- An employee-owned company truly committed to improving clients' competitiveness by offering consistent technical quality, responsiveness, and management over long-term relationships

Renewable Resources Services

Siting, Land Services, Survey, and Mapping

- Siting Requirements
- Project Planning, Mapping, and Data Collection
- Property Data Development
- Visual Simulations
- Turbine and Solar Array Layouts (Subconsultant Team)
- Land Services (Subconsultant Team)
- Topographic and Aerial Mapping
- ALTA/ACSM and Boundary Surveys
- Feasibility/Critical Issues Studies
- Regulation and Ordinance Reviews
- Phase 1 Environmental Site Assessments

Cultural Resources

- Archaeology
- Predictive Modeling
- Phase I, II, and III Surveys
- Historic Architecture Surveys and Documentation

Biological Field Services

- Stream and Wetland Delineation
- Aquatic Resource Surveys
- Avian Surveys

- Bald Eagle and Raptor Nest Surveys
- Bat and Mist Net Surveys
- Botanical Surveys
- RTE Habitat Surveys, RTE Presence/Absence Surveys

Environmental Permitting

- National Environmental Policy Act (NEPA) -Section 404/401-NPDES
- RTE Species Consultations
- Stream and Wetland Mitigation and Restoration
- Avian Consultation
- Cultural Resources Investigations and Clearances
- Stream and Wetland Crossing Permitting
- Visual Analysis
- Noise Impact Analysis
- Public Outreach Services
- Building Surveys

Construction Permitting

- Federal and State NPDES Permits
- Erosion and Sediment Control Plans and Permits
- Stormwater Management Plans and Permits
- Local Agency Consultation

- Land Development Plans
- Flood Plain Permits
- Highway Occupancy Permits
- Road Bonding Permits

Civil Engineering

- Grading Plans
- Drainage Plans
- Erosion and Sediment Control Design
- Drainage Remediation Design
- Stormwater Management Design
- Road Use Plans
- Road Analysis and Design
- Revegetation and Reclamation Plans

Geotechnical Engineering

- Site Characterization
- Geotechnical Investigations
- Foundation Recommendations
- Soil Improvement

Structural/Seismic Engineering

- Foundation Analysis and Design
- Seismic Design Criteria and Code Compliance

- Structural Analysis and Modeling
- Retrofit Design
- Substation Structure Design
- Riser Structure Design
- Bus Design
- Switch/Arrestor Support Design

Collection, Distribution, Transmission and Substation Design

- Wind and Solar Array System Design (Subconsultant Team)
- Collection System Layout and Design
- Transmission and Distribution Tap Line Design
- PLS-CADD Modelling and Design
- Overhead Line, Pole, Tower, and Foundation Design (34.5kV to 765kV)
- Underground Design
- Manhole Design and Electrical Design
- Reconductoring and Uprating
- Equipment Layout and Design

EPC Scope of Work Documents



Connect with Our Experts

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About GAI Consultants, Inc.

Transforming ideas into reality[®], since 1958, GAI is an engineering, planning, and environmental consulting firm providing local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets.



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