Ulteig

We listen. We solve.®



STATEMENT OF QUALIFICATIONS

RENEWABLE ENERGY

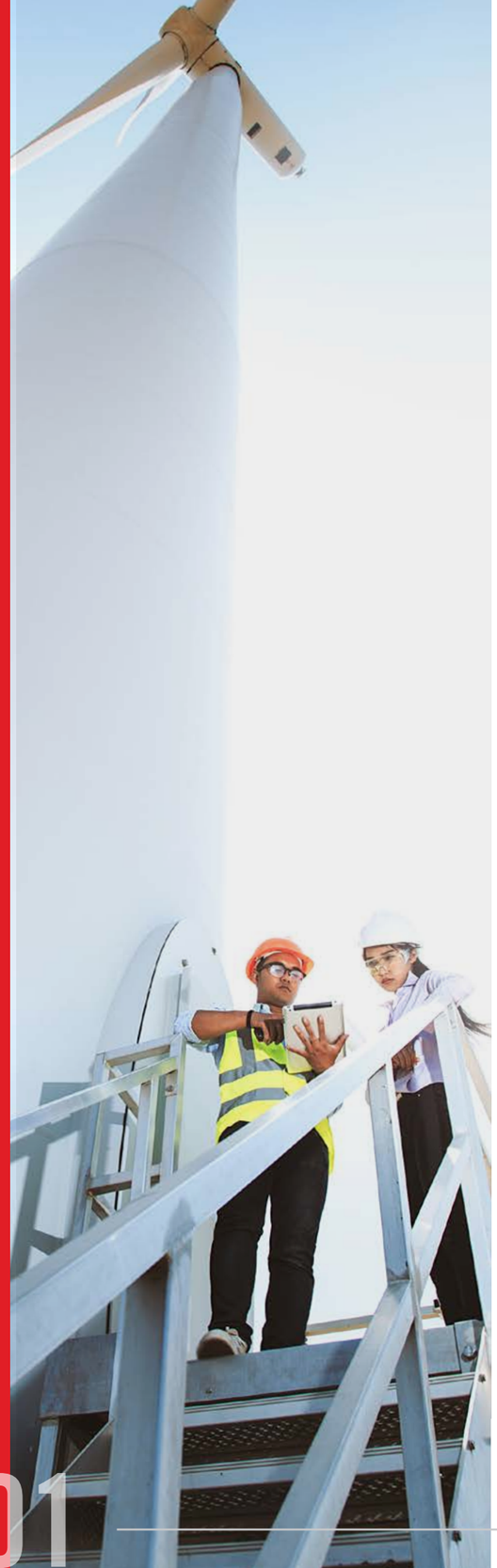


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WHO WE ARE

Ulteig is an established leader in the engineering industry, trusted for forward-thinking solutions and innovative expertise. Our growing team of more than 1,600 professionals crafts critical connections and develops the complex, multi-disciplinary strategies required in a dynamic world.

Across 17 offices and various satellite locations throughout North America, we offer comprehensive engineering solutions and responsive service to our clients' evolving needs across our core Lifeline Sectors® of Power, Renewables, Transportation and Water.

With flexibility, agility and collaboration, we are a partner ready to meet future challenges head-on.

Learn more about Ulteig's Lifeline Sectors.

THE VALUES AT OUR CORE

CLIENT SUCCESS:
We create exceptional value through our expertise and collaborative approach

INTEGRITY:
We are authentic and always do what's right

ENTHUSIASM:
We are passionate about the work we do and have fun doing it

INCLUSION:
We seek diverse backgrounds, empower all voices and value all perspectives

AGILITY:
We act with speed, flexibility and balance

INNOVATION:
We leverage ingenuity and foster creative outcomes



AWARDS AND RECOGNITION

RANKING #100 IN ANNUAL TOP 500 DESIGN FIRMS

EC&M TOP 10 ELECTRICAL DESIGN FIRMS

ZWEIG GROUP HOT FIRMS LIST

USA TODAY TOP WORKPLACES

ACEC NORTH DAKOTA ENGINEERING EXCELLENCE

ACEC COLORADO ENGINEERING EXCELLENCE

DENVER POST TOP WORKPLACES

PRAIRIE BUSINESS 50 BEST PLACES TO WORK

STAR TRIBUNE: MINNESOTA'S TOP WORKPLACES

ENERGAGE INNOVATION, PURPOSE & VALUES, LEADERSHIP +

ENGINEERING.COM TOP WORKPLACES

Proud Member

MILLION WORK HOURS AWARD

HOW WE WORK

Ulteig is committed to designing, planning, building and maintaining the interconnected infrastructure vital to everyday life. Through consultative partnership, we work with you to create and solve for a sustainable, connected and resilient world.

EMPLOYEE OWNED

1,600+ EMPLOYEES

350+ LICENSED PROFESSIONAL ENGINEERS

285+ SUBSTATION EMPLOYEES

220+ AUTOMATION, INTEGRATION AND SYSTEM PROTECTION EMPLOYEES

160+ T&D EMPLOYEES

100+ CIVIL EMPLOYEES

360+ ENERGY SOLUTIONS EMPLOYEES

65+ FIELD SERVICE EMPLOYEES

RENEWABLES MARKET OVERVIEW

As the demand for cost-effective and reliable renewable energy intensifies, Ulteig stands as the partner of choice, offering unparalleled engineering and consulting expertise. We leverage a diverse array of specialized skills to tackle the unique challenges of renewable energy projects through comprehensive solutions and full-project support.

OUR RENEWABLES TEAM WORKS IN THREE KEY MARKET AREAS: SOLAR, WIND AND ENERGY STORAGE.

WHO WE SERVE:

- DEVELOPERS
- CONTRACTORS AND ENGINEERING PROCUREMENT CONSTRUCTION (EPCS)
- OWNERS AND INDEPENDENT POWER PRODUCERS (IPPS)
- UTILITIES

KEY MARKETS:

- SOLAR
- WIND
- ENERGY STORAGE
- POWER DELIVERY - TRANSMISSION AND SUBSTATION
- EMERGING TECHNOLOGIES

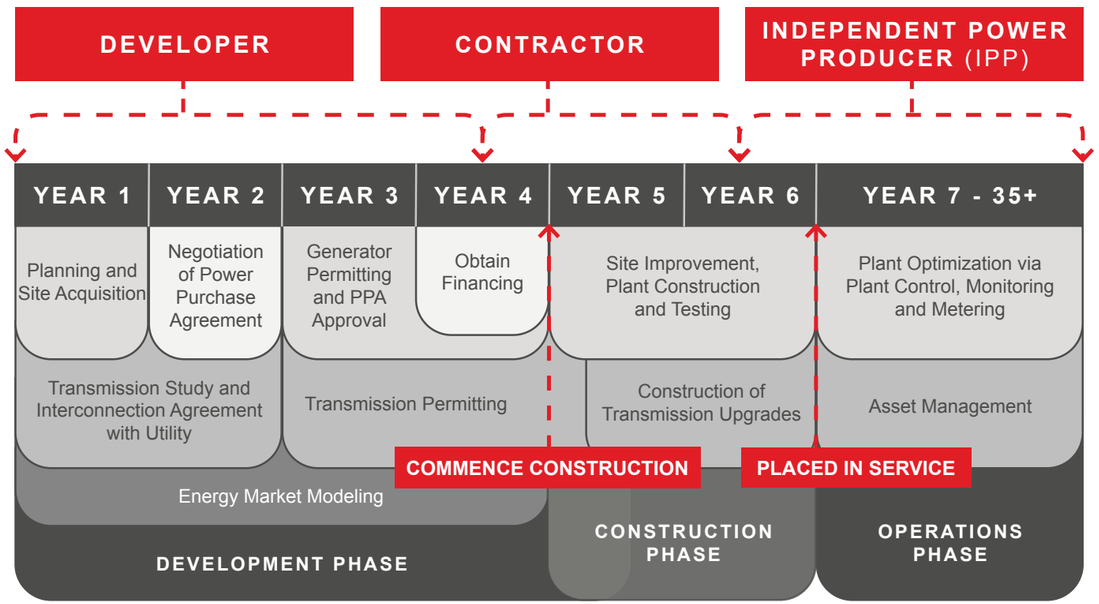
OUR EXPERTISE:

- PLANNING AND STUDIES
- LAND SERVICES
- ENVIRONMENTAL SERVICES
- MULTI-DISCIPLINARY DESIGN AND ENGINEERING
- SCADA/EMS
- PROJECT DELIVERY SERVICES AND OWNER'S REPRESENTATIVE
- ASSET MANAGEMENT





WORKING ACROSS THE PROJECT LIFECYCLE



SOLAR

With gigawatts of experience, we have a deep understanding of the entire development process, from concept to energization. Like the industry itself, our technology and equipment expertise are continuously evolving at the speed of innovation to meet the rapidly evolving needs of today's modern solar developers, contractors and owners.

We have the experience to know where solar has been and, more importantly, the strategic foresight to know where it's going next.

16 GW-AC
(20 GW-DC) EOR SOLAR PV DELIVERED

#8
2025 ENR SOLAR RANKING







SOLAR SOLUTIONS FOR EVERY PROJECT PHASE

DEVELOPMENT

- Transmission capacity prospecting and injection studies
- Pre-injection evaluations
- Energy market modeling
  - Preliminary and advanced locational marginal pricing (LMP)
  - Curtailment studies with binding constraints
- Interconnection applications, studies and models support (PSSE, PSLF, PSCAD, Aspen and others)
- Environmental desktop and field analysis
- Permitting support
- Land acquisition
- Land surveying (boundary, ALTA, topographic)
- GIS interactive web maps planning, implementation and data collection
- Transmission line routing and studies
- Preliminary site layouts and optimization
- Equipment lead time and specifications analysis
- Project specifications and design standards development
- Technical bid support

PRE-CONSTRUCTION

- 10%-30% multi-disciplinary design and engineering
  - Pile design
  - Hydrology/Hydraulic analysis
  - Grading
  - Reactive power compensation sizing studies
  - PV and High-Voltage (HV) design
- Geotechnical desktop
- Equipment selection and specification

CONSTRUCTION

- Multi-disciplinary Issued for Construction (IFC) design and engineering
  - Civil
  - Structural
  - Electrical (collection/PV, substation, transmission, system studies including NERC support and PSSE/PSLF modeling)
  - System integration, SCADA networking and plant control
- Environmental monitoring
- Survey (legal and construction staking)

AUTOMATION & INTEGRATION

- Substation SCADA
- Plant SCADA/EMS
- ISO Metering
- Commissioning
- System Integration

PROJECT DELIVERY & OWNER'S REPRESENTATIVE

- Project/portfolio and Construction Management
  - Project/portfolio development
  - Cost
  - Scheduling
  - Quality and risk management
  - Communication
  - Safety
- Interconnection/commissioning support
  - (CA)ISO metering and RIG engineering/management
  - System integration
- Owner's Engineering (OE) and alternate delivery

ASSET MANAGEMENT

- Meter calibration
- Operating system analysis
- Repowering
- NERC Compliance
- O&M analytics and optimization

WIND

Ulteig supports the design, development, interconnection and re-powering of utility-scale wind projects. With over 20 years of experience in the renewable industry, our clients derive the greatest value from their renewable investments when utilizing our full spectrum of integrated wind services.

Proactively engaging as your strategic partner, we drive efficiencies by applying discipline at every stage of a project's lifecycle. We also serve as a liaison and project facilitator, balancing the priorities of all involved stakeholders to ensure a timely, successful outcome.

49+ GW

EOR WIND DELIVERED

#8

2025 ENR WIND RANKING







WIND SOLUTIONS FOR EVERY PROJECT PHASE

DEVELOPMENT

- Transmission capacity prospecting and injection studies
- Pre-injection evaluations
- Energy market modeling
  - Preliminary and advanced locational marginal pricing (LMP)
  - Curtailment studies with binding constraints
- Interconnection applications, studies and models support (PSSE, PSLF, PSCAD, Aspen and others)
- Environmental desktop and field analysis
- Permitting support
- Land acquisition
- Land surveying (boundary, ALTA, topographic)
- GIS interactive web maps planning, implementation and data collection
- Transmission line routing and studies
- Preliminary site layouts and optimization
- Equipment lead time and specifications analysis
- Project specifications and design standards development
- Technical bid support

PRE-CONSTRUCTION

- Civil Engineering Design
- Medium-Voltage Engineering Design
- High-Voltage Engineering including Substation and Transmission Line Design
- System Integration and SCADA design
- Hydrologic/Hydraulic Modeling
- SWPPP and SPCCs
- Haul Route Analysis and Structural Load Ratings
- Turnkey engineering scope management
- Equipment specifications
- Scheduling and protection controls
- Define scope of work for project construction
- IE and financing due diligence support
- Decommissioning Plans
- Federal, State and Local Permitting

CONSTRUCTION

- Testing and commissioning
- Project controls
- Performance/acceptance testing
- Financial close and project closeout support
- Project commissioning
- SCADA commissioning field support and management
- Environmental monitoring, mitigation and restoration

PROJECT DELIVERY & OWNER'S REPRESENTATIVE

- Project and Construction Management
  - Project development
  - Cost
  - Scheduling
  - Quality and risk management
  - Communication
  - Safety
- Interconnection/commissioning support
  - (CA)ISO metering and RIG engineering/management
  - System integration
- Owner's Engineering (OE) and alternate delivery

ASSET MANAGEMENT

- Operations and maintenance manuals and onsite training for plant operation
- Performance monitoring
- Environmental monitoring
- Repowering

ENERGY STORAGE

Ulteig is advancing energy storage technologies that enhance grid resilience, reliability and sustainability. As the energy sector evolves with increased renewable integration and distributed resources, we deliver comprehensive solutions that generate significant revenue opportunities across the entire energy supply chain.

Our team provides expert guidance from project inception through completion, ensuring seamless integration and functionality at every phase. Our services encompass everything from understanding storage use cases and providing specialized engineering services to overseeing project management and system testing.

5+ GW / 20+ GWh

EOR BESS DELIVERED

#8

2025 ENR BESS RANKING



ENERGY STORAGE SOLUTIONS FOR EVERY PROJECT PHASE

DEVELOPMENT

- Transmission capacity prospecting and injection studies
- Pre-injection evaluations
- Energy market modeling
  - Preliminary and advanced locational marginal pricing (LMP)
  - Curtailment studies with binding constraints
- Interconnection applications, studies and models support (PSSE, PSLF, PSCAD, Aspen and others)
- Environmental desktop and field analysis
- Permitting support
- Land acquisition
- Land surveying (boundary, ALTA, topographic)
- GIS interactive web maps planning, implementation and data collection
- Transmission line routing and studies
- Preliminary site layouts and optimization
- Equipment lead time and specifications analysis
- Project specifications and design standards development
- Technical bid support

PRE-CONSTRUCTION & CONSTRUCTION

- Conceptual design
- Balance of plant/system engineering
- High-voltage engineering
- EPC support
  - Permitting
  - Environmental
  - Survey and staking
  - Procurement and logistics

AUTOMATION & INTEGRATION

- Use-case consulting
- AC/DC coupled and stand-alone
- Plant-level PV and storage integration
- SCADA and System Integration
- Power plant control
- Performance and financial reporting
- Commissioning
- Networking and NERC/CIP security
- Hardware and software supply

PROJECT DELIVERY & OWNER'S REPRESENTATIVE

- Project and Construction Management
  - Project development
  - Cost
  - Scheduling
  - Quality and risk management
  - Communication
  - Safety
- Interconnection/commissioning support
  - (CA)ISO metering and RIG engineering/management
  - System integration
- Owner's Engineering (OE) and alternate delivery

ASSET MANAGEMENT

- O&M analytics and optimization
- Environmental monitoring
- Performance monitoring

TECHNOLOGY OFFERINGS

At Ulteig, our approach to innovation is rooted in the development and practical application of emerging technologies and strategic services, designed to enhance efficiency and effectiveness across our Lifeline Sectors. We focus on delivering solutions that meet our clients' current needs and anticipate future challenges, ensuring sustainability and resilience in our projects.

Our suite of advanced solutions has grown to include SiteSense®-SCADA/EMS, a comprehensive SCADA-based management system for renewable energy projects; PinPoint®, a user-friendly GIS that transforms project management; and PathFinder®, which supports enhanced decision-making through its intuitive, data-driven interface.

These offerings collectively embody our commitment to leveraging technology to better serve our clients and their communities.

SiteSense® SCADA/EMS

SCADA-based hardware, software and implementation solution for utility-scale renewable energy sites.

45+ GW OF SOLAR AND BESS
USING ULTEIG'S SITESENSE®-SCADA/EMS





SCAN THE QR CODE FOR MORE INFORMATION ON SITESENSE®-SCADA/EMS

PinPoint®

Project management GIS tool designed to optimize data management, communication and more.

PathFinder®

Bias-free decision engine to streamline and enhance technology evaluations.



FEATURED SERVICES >



ENERGY MARKET MODELING →

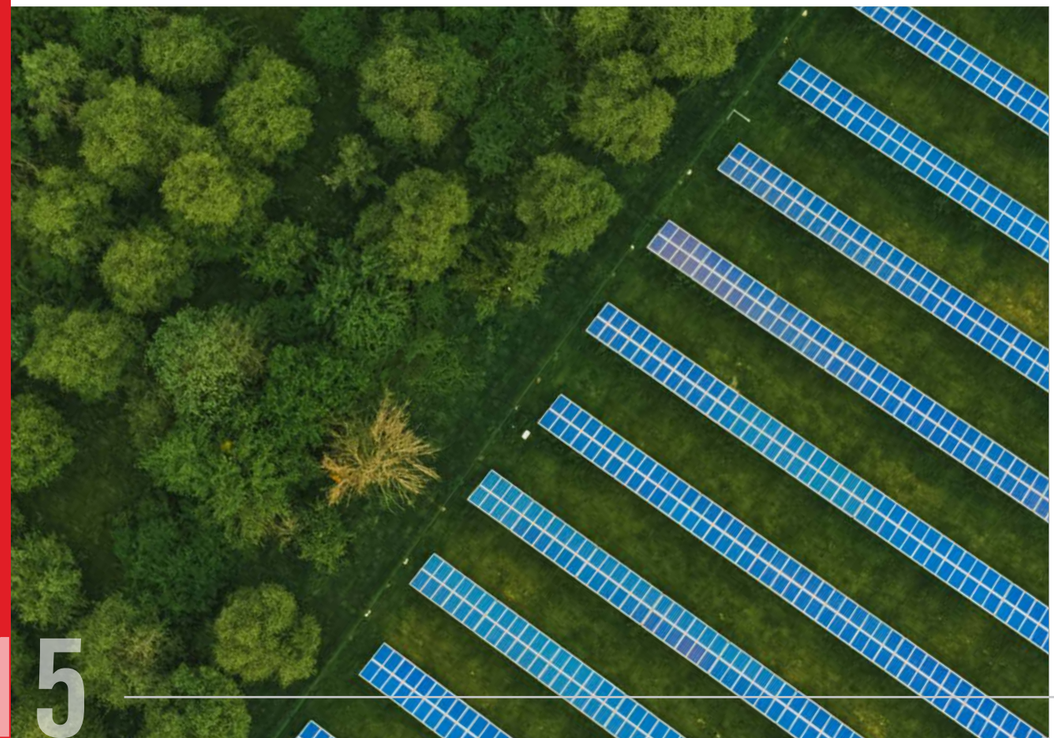
The evolving landscape of renewable energy is driven by legislative shifts and increasing financial incentives. Energy Market Modeling Services are crucial for navigating the complexities of this dynamic sector. Ulteig's approach to Energy Market Modeling addresses key client challenges by identifying revenue opportunities, optimizing asset utilization and reducing investment risks through advanced congestion insights.

Our strategic support integrates financial forecasting and geographical planning, powered by a team of dedicated experts using cutting-edge tools like PLEXOS® and TARA. This combination enables Ulteig to deliver data-driven insights, ensuring informed decision-making and successful implementation of renewable energy strategies. Through these services, Ulteig not only mitigates uncertainties but also improves market transparency, making us a trusted partner in shaping the future of renewable energy.

ENVIRONMENTAL →

Ulteig is committed to delivering modern, sustainable infrastructure solutions, offering a full spectrum of environmental services that encompass the entire project lifecycle. Our services include desktop and field analyses in pre-construction, development and operations; compliance with NEPA processes; and engagement with the public and stakeholders. We conduct comprehensive natural resource assessments, wildlife and habitat surveys and evaluate cultural resources through historical surveys and mitigation planning.

Our extensive permitting expertise covers all federal, state and local regulations. Additionally, we offer specialized services like environmental site assessments, asbestos inspections, stormwater pollution prevention inspections, construction monitoring and analyses of noise and viewsheds.





CAISO SERVICES →

Ulteig is a CAISO-approved Meter Inspection Company, providing trusted partnership in navigating the complexities of grid integration. Our range of CAISO services include: new CAISO interconnection, upgrading existing resources, Qualifying Facility (QF) conversions and optimizing metering and Remote Intelligence Gateway (RIG) installations to maximize revenue, meet CAISO tariff requirements and minimize risk. As a CAISO-authorized inspector, we streamline the design, procurement, execution and support of your metering and RIG projects, ensuring compliance and efficiency at every step.

Additionally, Ulteig excels in managing the CAISO New Resource Implementation (NRI) process, proactively addressing potential issues, overseeing project schedules and coordinating stakeholders to meet critical milestones like Initial Synchronization Date and Commercial Operation Date (COD).



OWNER'S ENGINEERING →

Ulteig's Owner's Engineering (OE) services stand as a pivotal component in ensuring projects not only meet but exceed expectations of timely and within-budget completion. Our OE team engages deeply across all project stages, from early development through to post-construction performance monitoring and commissioning efforts. This comprehensive involvement ensures that every aspect of the project aligns with the client's goals, optimizing both operational efficiency and financial performance.

Ulteig's progressive approach to Owner's Engineering transcends traditional roles by fostering a collaborative environment where technical expertise and strategic oversight converge. Our OEs are instrumental in risk management, quality assurance and stakeholder alignment, ensuring that every phase of the project adheres to the highest standards and that potential setbacks are proactively addressed. By facilitating effective communication among all parties involved and ensuring compliance with regulatory demands, Ulteig's OEs also enhance overall project value. This holistic service model, combined with a deep understanding of market trends and legislative incentives like the Inflation Reduction Act, positions Ulteig as a leader in driving successful outcomes in the renewables sector.

SYSTEM INTEGRATION & SCADA →

Ulteig's System Integration and SCADA services empower owners and operators within the Renewables sector by providing robust and adaptable control systems. These services include the design and integration of SCADA systems, network configuration and comprehensive solutions for plant control. Leveraging over two decades of experience, our team offers vendor-agnostic, customized solutions that enhance the functionality and reliability of infrastructure, ensuring operational efficiency and compliance with regulatory standards.

Our approach involves close collaboration with clients to tailor solutions that meet specific operational needs, from initial design to ongoing support during commissioning and planned outages. Ulteig's offerings also encompass advanced features such as customized alarm management strategies and real-time event alerts, which improve situational awareness and system responsiveness. By choosing Ulteig for system integration and SCADA needs, clients gain access to expert services that optimize system performance and enhance decision-making capabilities, ultimately contributing to a more secure and efficient operation.

45+ GW
OF SOLAR AND BESS
USING ULTEIG'S SITESENSE®-SCADA/EMS





EXPLORE MORE OFFERINGS >



3D MODELING →

Ulteig leverages advanced Autodesk software to deliver detailed and customizable 3D models and renderings, enhancing design precision for fabrication, construction and stakeholder engagement in public meetings and permit approvals.

ADVANCED ENERGY LAB →

We enhance substation reliability by pretesting critical control and communication systems, accelerating deployment and fostering innovation and training to benefit projects before construction begins.

CIVIL SITE DEVELOPMENT →

Ulteig's experts deliver client-focused infrastructure and site solutions that prioritize environmental excellence, code compliance and optimal site performance, ensuring streamlined permitting and budget protection for a diverse array of development projects.

COLLECTION SYSTEMS →

Ulteig excels in crafting collection systems that consider site specifics, project size and stakeholder requirements while facilitating cross-group collaboration for informed and cost-effective project decisions.

CONSTRUCTION MANAGEMENT →

Ulteig is an established and trusted partner in construction projects from start to finish. Through day-to-day presence and leadership at construction sites, we project our clients' interests, oversee adherence to policies and safety protocols, support efficient project progress and ensure quality delivery.





GEOGRAPHIC INFORMATION SYSTEMS (GIS) →

Ulteig harnesses cutting-edge GIS technology to deliver tailored geospatial solutions, from data collection to custom mapping, ensuring Renewables clients receive specialized support that aligns with their unique business needs.

GRID MODERNIZATION →

We guide utilities through the complexities of grid modernization, crafting custom strategies to enhance reliability, resilience and efficiency, and integrating advanced technologies for a future-ready electric distribution system.

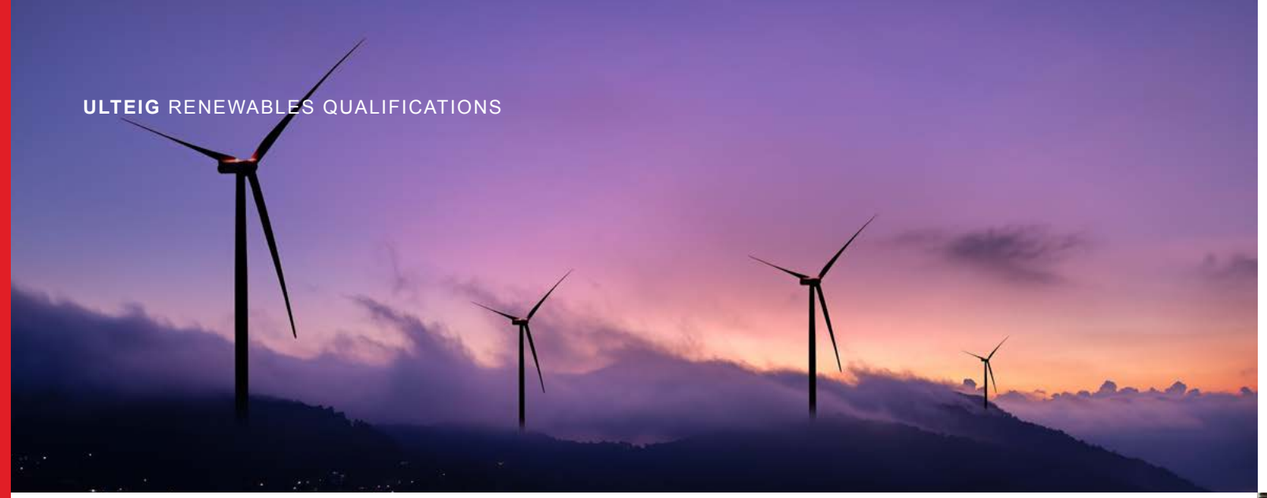
LAND SURVEYING →

Our survey team is renowned for delivering precise and reliable land surveys and construction staking services, utilizing top-tier technology to meet the specific needs of each project with exceptional accuracy and promptness.

NERC COMPLIANCE →

Through extensive NERC compliance services, we support companies with technical assessments, changing requirements and deadlines and maintaining core operations while meeting federal regulatory standards.





POWER SYSTEM STUDIES →

We equip clients to navigate the dynamic energy landscape with in-depth studies and analyses on transmission, substation distribution and generation interconnection, delivering the insights needed to make strategic decisions.

PROGRAM & PROJECT MANAGEMENT →

With a holistic approach to project coordination, we provide seamless integration across multiple disciplines, alignment with strategic goals and on-time, within-budget project execution.

RIGHT-OF-WAY →

Ulteig's real estate team specializes in right-of-way and land acquisition, expertly navigating complex regulations and ensuring smooth project progression with comprehensive services including documentation, permitting, negotiations and fostering positive community relations.



SUBSTATION ENGINEERING & DESIGN →

Ulteig has decades of experience in high voltage subsation design. This includes greenfield and station modifications from 5kV to 500kV. In addition to substation design, Ulteig offers protective relay settings and metering services.





SYSTEM PROTECTION ENGINEERING →

We provide comprehensive asset protection for both greenfield and brownfield projects, from generation to distribution. Our customized solutions ensure reliability, compliance and efficiency, and are tailored to meet the unique standards and protection philosophies of each client, thereby future-proofing their systems.

TRANSMISSION ENGINEERING & DESIGN →

Ulteig has extensive experience in transmission line projects, handling everything from initial planning and permitting to construction management for both AC and DC lines up to 500 kV.

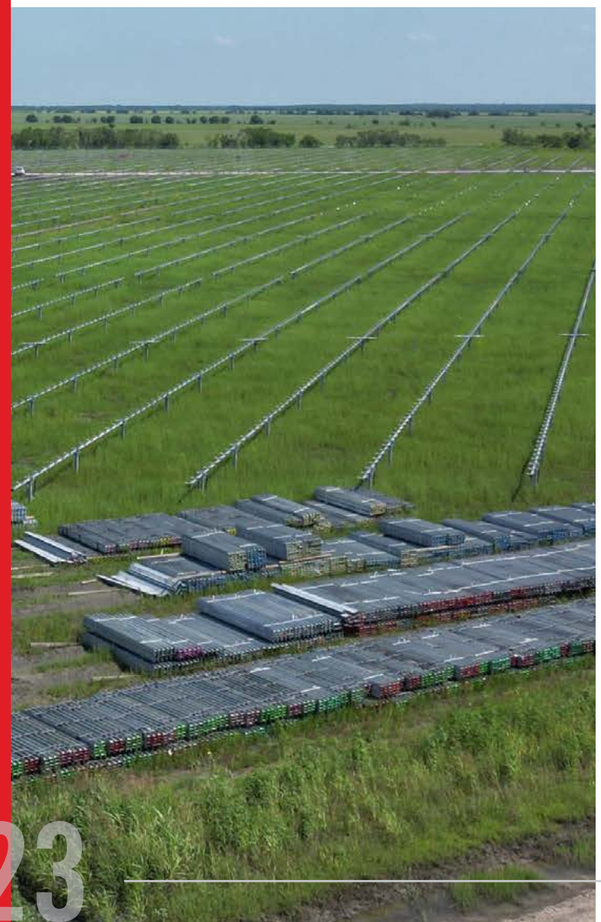
TRANSMISSION PLANNING →

Our expertise in regulations and transmission planning, including NERC compliance and generation interconnection, enables us to offer comprehensive study services to support informed decision-making.

PROJECT PROFILES







SOLAR

RED TAILED HAWK SOLAR

350 MW AC (460 MW DC)

The Red Tailed Hawk Solar project is a landmark solar farm development designed to bolster the renewable energy landscape of Southeast Texas. Ulteig partnered with Wanzek Construction, Inc., on behalf of the project owner and developer, ACCIONA Energía, to oversee the design, construction and energization of this 350 MW AC (460 MW DC) capacity solar farm.

Set to energize in 2024, the project will deploy over 850,000 solar modules, sufficient to meet the electricity needs of 66,500 households. The meticulously planned infrastructure includes a strategic layout that navigates environmental and civil constraints, a large substation design and a 4.6 mile 345kV transmission line for grid connection.

This collaborative effort not only signifies a significant step towards sustainable energy but also fosters economic growth, with over 600 jobs created during construction and the promise of long-term benefits for Wharton County.

EXPLORE PROJECTS >

WIND

WESTERN SPIRIT WIND

67 MILES OF TRANSMISSION
377 TURBINES
46 CAISO METERS
4 SUBSTATIONS
1,050 MW OF POWER

Ulteig was hired by Pattern Energy to design the collection systems, substations and gen-tie transmission lines for the Western Spirit Wind Projects, the largest clean energy infrastructure project in the U.S. The project encompassed the collection of energy from 377 wind turbines to transmit 1,050 MW of power through four substations and over 67 miles of 345 kV transmission lines.

The design caters to CAISO's stringent metering requirements, with 46 meters installed to accommodate power distribution from Corona, New Mexico to California. With a vast coverage of 292,000 acres across three counties and involving 40 landowners, Ulteig faced numerous challenges in routing collection cables, designing substations for future scalability and positioning transmission lines across difficult terrain while minimizing impact on land used for agriculture.

The integrated approach of Ulteig's various teams facilitated a streamlined, cost-effective design process, ensuring the project's success and reinforcing Ulteig's comprehensive expertise in power and renewables.



ENERGY STORAGE

TEXAS BATTERY STORAGE EOR

260 MEGAWATTS

Ulteig was commissioned to design one of the largest stand-alone battery energy storage systems (BESS) in Texas, boasting a capacity of 260 megawatts through over 3,000 lithium-ion modules. This significant project, at the time of project completion, enables the delivery of instantaneous power to around 130,000 residences on the ERCOT grid during peak demand periods. In addition to designing the BESS, Ulteig provided critical support in permitting, developed a Spill Prevention, Control and Countermeasure (SPCC) report and managed the placement and construction of a new on-site substation to connect the BESS with an existing natural gas power plant.

Faced with challenges such as complex site conditions, global supply chain disruptions and the need for unconventional backup power systems, our team demonstrated exceptional adaptability. The project's complexities included rerouting drainage due to existing utilities and adjusting designs to accommodate available materials. Notably, the decision to integrate a diesel generator for emergency power underscored Ulteig's commitment to ensuring system resiliency and risk management.

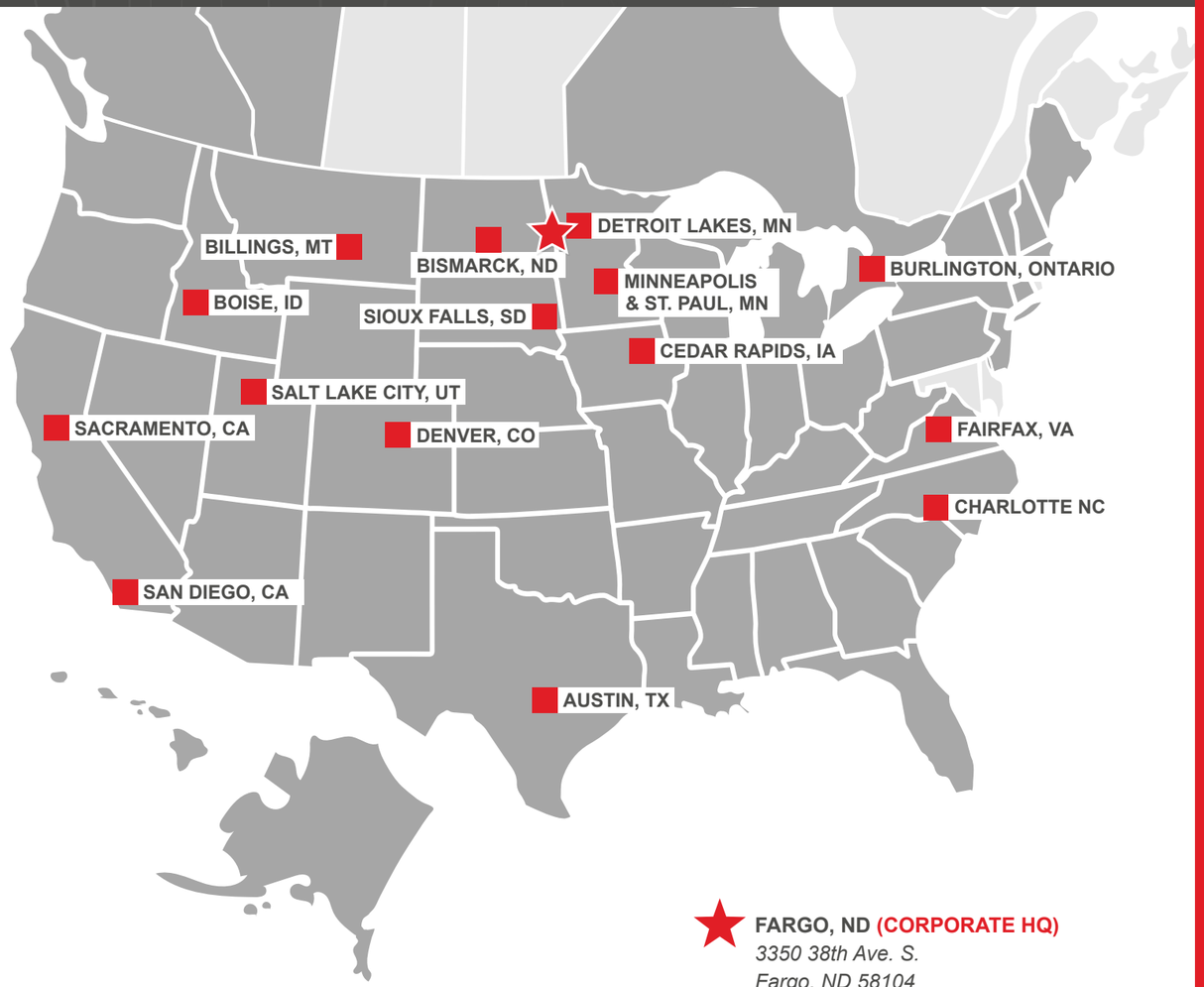




LOCATIONS AND CONTACT

We have locations throughout North America to best serve our surrounding communities.

DISCOVER AN ULTEIG LOCATION NEAR YOU. →



CONTACT OUR RENEWABLES TEAM >

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3350 38th Ave. S.
Fargo, ND 58104
PH: 888.858.3441
FAX: 844.270.6162

STATES AND PROVINCES WITH ULTEIG EMPLOYEES

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CONNECT@ULTEIG.COM



Ulteig

Ulteig delivers comprehensive engineering/design services, program management, technical services and field services that strengthen infrastructure vital to everyday life. An employee-owned company, Ulteig connects people and resources to develop compelling, integrated solutions across the Lifeline Sectors of power, renewables, transportation and water. Ulteig leverages its expertise throughout North America with a wide range of public and private clients.