TRANSMISSION SERVICES
ROUTE SELECTION
PERMITTING & REGULATORY SUPPORT

Statement of Qualifications
Amid rising energy demands and aging infrastructure, electric utilities throughout North America are tasked with making improvements to meet today’s reliability needs while building capacity for the electricity demands of tomorrow. Embarking on an electric transmission improvement project with a reduced staff, under constrained schedules, and in the face of public opposition can be a daunting task for any utility.

The Louis Berger Group’s Transmission Services Division focuses on providing the environmental planning, permitting, and regulatory support necessary to meet the ever growing demands on our electric utility clients. Our team understands the unique challenges the industry faces and has the knowledge, experience, and capacity to meet these challenges in a responsive, professional, and creative way.

Our service areas include the following:

- Routing and Site Selection
- Public Outreach Support
- Permitting/Compliance Monitoring
- NEPA Support for Federal Actions
- Natural Resource Management Planning

Enclosed you will find information about these services and a variety of key projects that illustrate the range of experience and depth of professional resources that make The Louis Berger Group a leader in the transmission services industry for public and private utilities nationwide.
Who We Are

The Louis Berger Group, Inc. (Berger) is an internationally recognized consulting firm that provides services to utility clients for the generation and transmission of energy. We provide environmental science and planning, economic development, engineering, architecture, and program and construction management services. We are a devoted and trusted partner to the utility industry, as well as to federal, state, and local government agencies. To this diverse client base we bring strategic vision and an entrepreneurial spirit, developing innovative solutions to some of the world’s most challenging problems. Berger partners with our clients to tackle large-scale, complex, and controversial projects that require significant stakeholder coordination and facilitation. Our team understands the requirements associated with such complex technical endeavors, and we maintain the professional resources to provide a solid foundation of analysis and execution to support our clients’ programs and decisions.

With a resource base of more than 5,000 professionals and affiliate employees in more than 90 countries, we are able to respond to local conditions while providing clients with world-class scientific and industry experts of a leading global organization. Berger has more than 450 professionals dedicated to providing our clients with a full range of transmission consulting services to support route selection, permitting, and regulatory environmental compliance.

Where We Are

Berger is headquartered in Morristown, New Jersey, but has domestic offices in every corner of the United States—from Seattle, Washington, to Miami, Florida. From these offices, we can easily mobilize to any location a project takes us.
Route and site selection studies are the foundation of any transmission expansion or substation development project. The results of the route selection and siting study serve as the information base upon which nearly every subsequent phase of the project—from right-of-way acquisition to engineering, construction, and finally long-term operation and management—are based. Berger’s Transmission Services Team not only recognizes the critical importance of route selection and siting studies in setting the foundation for a successful project, but also has the experience supporting each subsequent project phase to successfully capitalize on that foundation throughout the lifecycle of the transmission infrastructure development process.

To ensure success, we engage a broad range of in-house staff disciplines to ensure that our studies are comprehensive and set the stage for the following state regulatory process and construction permitting efforts.

Our teams include:

- Experienced transmission and substation siting experts;
- Scientists specializing in wildlife, wetlands, soils and hydrology, aquatic species, and botany;
- Archaeologists, anthropologists, and cultural resource specialists;
- Landscape architects and graphics specialists experienced in photosimulation and visual impact assessment;
- Regulatory experts specializing in local planning and zoning, state regulatory requirements, the National Environmental Policy Act; and
- Geographic Information System (GIS) specialists.
TRANSMISSION SERVICES
STATEMENT OF QUALIFICATIONS
ROUTE AND SITE SELECTION

The Transmission Services Team has extensive experience conducting route selection studies for transmission lines, ranging in size from 69- to 765-kV and in length from a few miles to hundreds of miles across multiple states. Nearly all of these efforts also include substation site selection or, at a minimum, a review of conditions for substation expansion. For these projects, Berger provides two general levels of route and site selection services: Project Screening Studies and Route and Substation Site Selection Studies.

Project Screening Studies

Project Screening Studies provide our clients with an initial high-level review of the current infrastructure, environmental constraints, and potential risks to a proposed project. The screening studies assist system planners by providing information concerning the nuances of the social and regulatory environment and who may lack essential tools such as conceptual schedules and cost estimates for planning, permitting, and regulatory support efforts. Our project screening/feasibility studies are low-cost, initial reviews of the route selection and siting environment, and regulatory process requirements. Our screening studies also include estimates of the level of effort and approximate timetables for a full route and site selection study, regulatory hearing support, and permitting effort. The Project Screening Study provides the information necessary for utility managers to prioritize projects, identify risks, assess staffing, and estimate budget requirements in the early stages of project development.

PENNSYLVANIA TRANSMISSION REINFORCEMENT PROJECT
FIRST ENERGY

FirstEnergy Service Company (FE) of Akron, Ohio, selected the Transmission Services Team to perform a project screening study for this eastern Pennsylvania transmission reinforcement project. The study evaluated potential route alignments for a new 115-kV line as well as several sites for multiple substations to connect into the local 230-kV system.

The Transmission Services Team conducted a route screening study to identify several alternative routes and substation locations for the proposed 115-kV line. Conceptual routes were developed to consider numerous environmental and land use constraints, including Pennsylvania state forests and natural areas, wetlands, topography, major recreational areas, and residential development in the area. The team considered a range of potential substation sites and evaluated environmental constraints, potential access points, and land parcels available for each.

The Transmission Services Team also prepared a review of the federal, state, and local permitting requirements, including: a general description of the anticipated permitting process for the two likely best routes, including tasks, time requirements, and estimated permitting costs; identification of the anticipated field studies that would be required, including scopes of work and potential seasonal limitations; and an opinion of the probability of obtaining the necessary approvals for one of the two identified routes.

PENN'S YLVANIA TRANSMISSION REINFORCEMENT PROJECT
FIRST ENERGY

FirstEnergy Service Company (FE) of Akron, Ohio, selected the Transmission Services Team to perform a project screening study for this eastern Pennsylvania transmission reinforcement project. The study evaluated potential route alignments for a new 115-kV line as well as several sites for multiple substations to connect into the local 230-kV system.

The Transmission Services Team conducted a route screening study to identify several alternative routes and substation locations for the proposed 115-kV line. Conceptual routes were developed to consider numerous environmental and land use constraints, including Pennsylvania state forests and natural areas, wetlands, topography, major recreational areas, and residential development in the area. The team considered a range of potential substation sites and evaluated environmental constraints, potential access points, and land parcels available for each.

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Route and Substation Site Selection Studies

In contrast to the Project Screening Study, our Route and Substation Site Selection Studies are complete, legally defensible siting studies, which include public outreach support, agency coordination, regulatory application preparation support, and expert witness testimony. The following sections outline the major phases of the route selection process and our comprehensive support services for these efforts.

Route Development, Analysis, and Selection

Our route development and site selection process is designed to be logical and legally defensible. Our process relies on the knowledge and experience of our routing team members, applies the latest advancements in computer technology for planning and evaluation, and effectively incorporates agency and public input into the planning process. Although technology is a key component in all of our efforts, we do not rely on the output of a computer model for answers. Information gathering efforts are comprehensive, making use of a combination of field reconnaissance efforts, aerial photography of the area, available GIS information, and information gathered through agency coordination and public outreach efforts. By the time final alternative routes are developed for analysis, comparison, and final route selection, our team is intimately knowledgeable about all aspects of the study area, including its resources, constraints, regulatory requirements, and existing infrastructure.

Agency Coordination

Coordination with federal, state, and local regulatory and planning authorities is critical to conducting any route or site selection study. Identifying and coordinating with relevant agencies or planning authorities not only ensures that the most up-to-date information is used for the route development process but also that the routing process is recognized as a good faith effort to take into account the wide ranging, and often conflicting, concerns of federal, state, and local resource and regulatory authorities.

"I really do appreciate the efforts you and the team are making. I know we threw extra stuff and changes at the last minute but, as always, you have shown you will do what it takes to get it done on time. I have worked with lots of vendors/contractors and I can think of one other that I felt was as committed as you have been - thank you."

Jay Ruberto
Director, Transmission Siting
Allegheny Energy
Early in the process, our team develops a comprehensive plan and protocol for establishing and maintaining contacts with federal, state, and local resource and regulatory authorities.

Visual Impact Assessment and Photosimulation
Visual impact analysis is a key element of all transmission planning efforts and is one of Berger’s strengths. While most of our competitors conduct these efforts through subcontractors, our visual impact assessment and photosimulation are integrated processes prepared in collaboration with our Multimedia Services Department.

Berger’s Multimedia Services Department is a centralized team of skilled computer graphics technicians experienced in developing photosimulations and graphic depictions of transmission infrastructure. Our team has prepared computer-generated renderings of transmission lines, substations, and mitigation treatments. We also provide animated computer-generated renderings that simulate travel through a three-dimensional computer model of the project site and examine project views from multiple perspectives.

Regulatory Filing Support
Line and/or Substation Siting Studies serve as the foundation of regulatory filings for any transmission improvement project, and they must be comprehensive, responsive to the regulatory requirements, well documented, and legally defensible. Our Team has extensive experience preparing routing studies and the environmental and cultural resource documentation necessary to support regulatory filings for transmission infrastructure. We can work with your legal counsel to ensure that the necessary regulatory statutes are considered in the routing process and that all products prepared meet the regulatory requirements for your application.

Our staff have served as expert witnesses for transmission projects in numerous regulatory proceedings in a number of states and before the Federal Energy Regulatory Commission. We understand the tight schedule requirements necessary for legal responses, the process of preparing written testimony, and the preparation process for oral testimony. We will work with your attorneys to ensure that data requests are met effectively and on schedule.

"Wanted to pass along our appreciation for the incredible job that the Berger team did in helping us file the Susquehanna-Roseland Project application today with the PA PUC. The culmination of a full years’ work in preparing the siting report and then developing this extensive filing application is a remarkable milestone and would not have been possible without (Berger’s) patience, perseverance and professionalism. We all look forward to continuing to work together as the permitting moves forward."

Patrick McMackin P.E.
Project Director
Susquehanna-Roseland Project
Berger has extensive capabilities and experience facilitating public outreach efforts for transmission infrastructure projects. Our support includes developing informational brochures, mailings, and media materials; facilitating public workshops and local meetings; and managing the receipt, response, and tracking of public comments. We believe that engaging the public through a proactive outreach campaign is critical to siting transmission infrastructure in today’s environment. Our dedicated staff is able to provide the support and necessary tools in order to integrate this process into your route and site selection efforts.

Berger’s Public Comment Management Console (PCMC) is a key resource for managing the public input, response, and reporting requirements of our transmission clients. This web-based console serves as a repository for all public input and a portal for providing responses, tracking issues, and understanding public comments. The PCMC has supported several major transmission infrastructure improvement projects, providing not only a web-based structure for organizing the public communication process but also serving as a powerful tool for considering the geography of issues across the study area and efficiently preparing a complete record of public input for regulatory filings.
Berger’s extensive and diverse team of planners and environmental, natural resource, and cultural resource scientists are prepared to handle any standard and/or non-standard compliance requirement necessary to get your project to construction. The following sections present some of the standard permitting and compliance requirements and our relevant experience in these areas.

Wetlands Delineation and Jurisdictional Waters
Berger’s Environmental Sciences Division has extensive nationwide experience conducting thousands of wetland delineations and coordinating with the U.S. Army Corps of Engineers (USACE) on more than 300 Section 404/401 permits in the last 25 years. Our long working history with USACE and state environmental protection agencies, both separately or through joint state application processes, provides us with the knowledge and understanding of the process and ensures our high quality applications are accurate and complete.

Historic and Archaeological Resources
Berger’s in-house cultural resource group is recognized nationally and internationally for its prominent historic, archaeological, and historic architectural, and cultural resource management and planning services. Berger has conducted more than 3,000 cultural resource assessment projects in the United States and abroad since 1981.

Berger’s cultural resource team includes a multidisciplinary professional staff of archaeologists, historians, and architectural historians. Our team routinely conducts archaeological evaluations and data recovery; impact assessments for cultural resources; and laboratory processing and analysis of archaeological materials. Our team also provides professional guidance for cultural resource management planning including, historic structure recordation under Historic American Buildings Survey/Historic American Engineering Record, National Register of Historic Places evaluation, and Section 106 compliance.
Threatened and Endangered Species Studies

Berger has experience with the federal Endangered Species Act (ESA) and with state sensitive species regulations. Our team of wildlife biologists, aquatic biologists, and botanists has conducted threatened, endangered, and sensitive species surveys/habitat assessments for a range of plant and animal species.

Our specialists are also familiar with the formal documentation and consultation requirements of the U.S. Fish and Wildlife Service (USFWS) and have prepared biological assessments in support of ESA requirements under the NEPA.

Although our staff is capable of conducting field surveys for many rare species, Berger also maintains relationships with a network of biologists throughout the country who are specially trained in survey protocols and are licensed to handle or consult on federally or state-listed sensitive species. Regardless of the locale, our team can provide the field staff, management, and regulatory compliance resources to support sensitive species consultation efforts for projects nationwide.

SUSQUEHANNA–ROSELAND 500 KV TRANSMISSION LINE
PPL ELECTRIC UTILITIES

The proposed Susquehanna to Roseland 500-kV Transmission Line calls for the construction of approximately 150 miles of 500-kV transmission line, 100 miles of which extend from the Berwick area in Pennsylvania to the Delaware River. The Louis Berger Group was retained by PPL to conduct route selection, field studies, permitting, and public outreach support for the Pennsylvania Public Utility Commission (PUC) licensing process, expert witness testimony, and various environmental and regulatory support services for this major transmission infrastructure improvement project.

Berger is leading the project permitting effort on behalf of PPL. The Berger team’s work has involved conducting wetland delineations and preparing jurisdictional determination documentation for the USACE; preparing and submitting wetland/water encroachment permit applications to the Pennsylvania Department of Environmental Protection and USACE; conducting surveys and developing mitigation measures for protected plant and animal species; preparing and submitting soil and erosion control plans, stormwater management controls, and National Pollutant Discharge Elimination System permit applications to five County Conservation Districts; conducting extensive cultural resource (archaeological and historic architecture) investigations and developing mitigation measures; preparing a State Forest Environmental Review as part of a proposed License Agreement with the Pennsylvania Department of Conservation and Natural Resources; providing environmental and regulatory support in efforts to work with the National Park Service in the Delaware Water Gap National Recreation Area; and consulting on an on-going basis with numerous federal and state agencies.

An additional 47 miles of work for this line was performed for Public Service Electric and Gas. More information about this portion of the project can be found in Section 7.
Berger has extensive experience with the NEPA process and preparing NEPA documentation for federal actions. Not only have we commonly prepared third-party environmental assessments (EAs) and environmental impact statements (EISs) for our utility clients but also have directly conducted hundreds of NEPA efforts for more than 20 federal agencies. Whether crossing federal lands or applying for a federal funding mechanism, our team understands the NEPA process and can provide support to fulfill NEPA requirements from the Notice of Intent to the Record of Decision.

**MEADOWBROOK TO LOUDOUN 500-KV TRANSMISSION LINE**

DOMINION VIRGINIA POWER

Berger was contracted by Dominion Virginia Power to conduct permitting efforts for its 500-kV line from the Appalachian Trail in Linden, Virginia, to the Loudoun Substation in Loudoun, Virginia. A variety of permitting efforts were conducted and continue on the project, including: Section 404/401 process, including the delineation of wetlands along 62 miles (approximately 2,000 acres) of right-of-way; survey and assessment of sensitive migratory birds, sensitive plants, and sensitive mussel habitats; review of all stream crossings with the Virginia Marine Resources Commission; and preparation of architectural and archaeological surveys in support of Section 106 compliance for the Virginia Department of Historic Resources. Approval for both applications has been obtained from USACE allowing for construction efforts to begin on schedule. In addition, Berger has also provided NEPA support for the project by preparing EAs for the line’s crossing of two National Parks: the Appalachian National Scenic Trail and the Manassas National Battlefield Park.

**Background Image:**

*Photo Credit: Horia Varlan*
Right-Of-Way Natural Resource Management

Berger has experience developing and updating right-of-way management planning documents for guidance and use by regulatory compliance offices or agencies. Our right-of-way management specialists develop plans that incorporate current industry standards, requirements, methods, and practices and provide reference to relevant regulatory statutes and points of contact for right-of-way management staff. Berger has experience developing and updating right-of-way management plans concerning water resources, avian risk potential, invasive species control, and environmental risk management planning.

Avian Mitigation Management Plans

Electric transmission lines, distribution lines, and wind turbines are often identified as sources of avian collision mortality and have contributed to cases of bird electrocution. The USFWS can and does take legal action against utility companies if it is known that their equipment is causing reoccurring avian fatalities and mitigation measures have not been implemented.

Berger understands the importance of protecting avian species and can work with you to design a mitigation management plan to help protect vital avian resources without impeding energy delivery. Our staff of avian ecologists can help your company locate potential risk areas on your existing system, and develop mitigation strategies to reduce future liability. We can assist you in interpreting and implementing the appropriate measures of an avian protection plan to suit your needs, and help you take the steps necessary to address avian protection concerns while ensuring safe and reliable service to your customers.
Invasive Vegetation Management Plans
Management of invasive and noxious vegetation has gained much attention in recent years from regulatory agencies, private landowners, environmental stewardship organizations, and farmers. Construction and operational maintenance activities on utility rights-of-way can create ideal conditions for these undesirable plant communities to establish and spread into undisturbed habitats. Incorporating a sound plan for managing invasive vegetation is a proven way to send a positive message to customers, rate payers, and regulators that your company promotes a healthy environment.

Berger’s environmental scientists are adept at identifying invasive and noxious species throughout North America and can help you inventory your assets for invasive species concerns. Once populations are identified, Berger specialists can then help develop individual management strategies to either eliminate or minimize the possibility of transporting invasive species to new locations.

Environmental Risk Management Plans
Development and maintenance of a collection of construction practices and procedures (P&Ps) during project planning and construction can take the guess work out of regulatory compliance requirements and minimize schedule and budget risks. This P&P collection, or "environmental tool box," is developed by blending recognized Best Management Practices (BMPs), industry knowledge and experience, and specific agency requirements into a guidance manual for your project team, department, or for use across the company.

Examples of P&Ps designed to protect resources include:

- Marking of Regulated or Sensitive Environmental and Cultural Resources
- Invasive Plant Species Management
- Wetland and Waterway Crossing
- Right-of-Way Vegetation Clearing
- Dewatering Guidelines
- Sediment and Erosion Control
- Agricultural Land BMPs
- Spill Prevention and Response
- Site Restoration
- Post-Construction Monitoring and Mitigation

Once completed, Berger staff can support the development of training materials and provide on-site or web based training to all environmental personnel. In addition, our team can assist your staff in providing pre-construction training to project personnel as well as periodic refresher spot training when working in especially sensitive locations.

“Our Bismarck office just had a NERC compliance audit done for vegetation management. We were given very high marks on the audit. A lot of it had to do with our documentation and the Vegetation Management Manual that you prepared was a large part of that.”

David Pearson
Environmental Engineer
Western Area Power Administration
Selected Project Experience

POTOMAC APPALACHIAN TRANSMISSION HIGHLINE (PATH)
AMERICAN ELECTRIC POWER / ALLEGHENY ENERGY

Berger conducted route selection, substation site identification, public outreach, and is currently providing permitting services for the Potomac Appalachian Transmission Highline (PATH), a joint venture project between Allegheny Energy and American Electric Power. The 275 mile project consists of a single-circuit 765 kV line beginning at AEP’s Amos Substation in Putnam County, West Virginia and ending at a proposed substation in Kemptown, Maryland. Berger completed the routing studies for approximately 230 miles of the PATH Project in West Virginia and Virginia and conducted the siting analysis for a midpoint 765/500 kV substation. As part of this effort, the Berger team facilitated the public involvement process for the project and coordinated with all county and local planning officials. In addition, Berger has facilitated coordination with all state resource agencies, the U.S. Forest Service, and the National Park Service. Berger is currently providing expert witness support for filings in West Virginia and Virginia.

In addition to siting, the Berger team has also been engaged to conduct environmental and cultural permitting along the 230 mile route through parts of West Virginia and Virginia. Field surveys in progress include: wetland and water resource studies, archaeological and architectural history surveys, and surveys for threatened and endangered species. The Berger Team is also developing and providing training for an Environmental Management System to support eventual construction efforts.

SUSQUEHANNA–ROSELAND 500-kV TRANSMISSION LINE
PUBLIC SERVICE ELECTRIC AND GAS

Public Service Electric and Gas (PSE&G) proposes to construct a 500-kV transmission line extending approximately 47 miles between PSE&G’s new 500-kV switchyard in Roseland, New Jersey, through a new 500-kV switchyard in Jefferson, New Jersey, to a crossing point on the Delaware River. At this crossing point, PSE&G’s proposed line will meet with a new 500-kV transmission line being sited by PPL Electric Utilities (PPL) from its Susquehanna Switching Station. Berger provided route selection, environmental and permitting support that included threatened and endangered species, wetlands delineation, and cultural resource studies to both PSE&G and supporting the BPU Process. Berger worked closely with a subcontractor to complete the easement negotiation and engineering aspects of the project.

Berger is also preparing applications to New Jersey Department of Environmental Protection for an Individual Freshwater Wetlands Permit, an Individual Open Water Fill Permit, a General Permit No. 12, Water Quality Certification, and an application for a Highlands Applicability and Water Quality Management Plan Consistency Determination. Finally, Berger is preparing Soil Erosion and Sediment Control Plans for Warren, Sussex and Morris Counties and preparing Green Acres applications.
OSAGE–WHITELEY DOUBLE CIRCUIT 138-KV PROJECT
TAILCO, AN ALLEGHENY ENERGY COMPANY

Berger is providing route selection and permitting services for the Osage to Franklin double-circuit project between the Osage Substation, in Osage, West Virginia to the Franklin Substation, near Waynesburg, PA with a connection through the 502 Junction and Whiteley substations. The portion of the line between the Whiteley Substation and the Franklin Substation will be a rebuild of an existing 138-kV line, while the portion between the Osage Substation and the Whiteley Substation will be a new corridor.

The Transmission Services Team has developed several alternative routes for the new transmission line and will analyze these routes to select an environmentally compatible route that minimizes impacts to the natural and cultural environment. Berger is intimately involved in the preparation and support the public outreach process and will use this information to further evaluate the routes. Following completion of the Line Route Evaluation Report, we will prepare expert witness testimony for submittal with the application. The routing team will provide support throughout the regulatory process, coordinating with legal counsel on data requests and additional analysis as required.

The Transmission Services Team has also been tasked with the environmental permitting for the entire line between the Osage and Franklin substations. Berger will provide permitting support that will include, threatened and endangered species surveys, wetlands delineations, and cultural resource

TEHACHAPIE TRANSMISSION LINE PROJECT
SOUTHERN CALIFORNIA EDISON

Southern California Edison (SCE) received authorization to construct, operate, and maintain a 25.6-mile 500-kV transmission line between existing Antelope and Pardee substations in northern Los Angeles County, California. The proposed project would be constructed within an existing 66-kV right-of-way for 22.8 miles.

Berger provided on-site monitoring for environmental issues, including hazardous spill reporting, biological sweeps, snake removal, Storm Water Pollution Prevention Plan monitoring and daily report writing. We identified rare plants, bird nests, mammals and invertebrate species (especially rattlesnakes), and any other issues that could have been a safety or environmental concern. Berger ensured that impacts to special-status species including protection of nests and eggs covered under the Migratory Bird Treaty Act and California Department of Fish and Game codes; native vegetation; wildlife habitat; or unique resources were minimized to the fullest extent possible. Where appropriate, our team flagged the boundaries of areas where activities need to be restricted in order to protect wildlife, including special-status species. These restricted areas will be monitored to ensure their protection during construction.
SOUTHERN LOOP COOLIDGE CONNECTOR PROJECT
VERMONT ELECTRIC POWER (VELCO)

Berger assisted VELCO in completing three ambitious transmission projects in Vermont. One of these projects was the proposed Southern Loop Coolidge Connector Project to address the growing constraints on southern Vermont’s existing electrical system. The Southern Loop is made up of a 66-mile-long, 46-kV transmission line and related substations between Bennington and Brattleboro. The proposed 345-kV Coolidge Connector is planned to be constructed between Dummerston and Cavendish, parallel to an existing 115-kV transmission line. Berger reviewed applicable statutory standards and guidelines from the U.S. Environmental Protection Agency, World Health Organization, and Vermont Environmental Board to evaluate potential impacts of air and noise pollution. The team also conducted public health and safety assessments related to electric and magnetic field issues. Additionally, Berger conducted an Archaeological Resources Assessment to review the sensitivity of the proposed project corridor; a historic architecture survey to identify historic properties listed, and/or eligible for listing, on the national register of historic places and the Vermont state register of historic places; and a viewshed aesthetic analysis in preparation of photo simulations and plans for mitigation to include in the application of the proposed connector.

MONTEZUMA TO OTTUMWA GENERATING STATION
ALLIANT ENERGY

Berger’s Transmission Services Team provided archaeological assessment and monitoring services in support of Alliant Energy’s emergency rehabilitation of a 345-kV transmission line servicing south-central Iowa. A 19-mile-long segment of the line collapsed following a strong winter storm that brought freezing rain and strong winds to the area. Berger completed a records review and field assessment of the project corridor, which crossed 18 known archaeological sites, and worked with Alliant and Iowa’s State Historic Preservation Office to design measures to safeguard historic site areas during the rehabilitation work. Measures included marking sensitive areas for avoidance during construction and establishing travel lanes for vehicle traffic to minimize damage to site areas. Berger also provided on-call support during the rehabilitation effort to monitor impacts to sensitive historic site locations and completed a systematic survey of the entire transmission line corridor as directed by the Iowa State Historic Preservation Office. New discoveries included one previously undocumented pioneer cemetery near the project corridor, which was recorded to ensure its future protection.
Hudson Energy Submarine Cable
GenPower LLC

GenPower planned to construct an 800-megawatt (MW) natural gas fired electric power generation facility in Nova Scotia, Canada, and transport the power via an offshore submarine high voltage direct current (HVDC) cable to New York City. Berger was contracted by GenPower to provide overall management of the cable routing and installation and obtain the necessary permits and approvals to install the submarine HVDC cable.

Berger coordinated with USACE, National Marine Fisheries Service, USFWS, and the New York State Department of Environmental Conservation. Berger reviewed the full range of applicable scientific data and information with regards to benthic biology, fishing resources and patterns, hydrodynamics, sediments, sediment transport, shipping channels, and more. Berger compiled a New York State Public Service Commission Article 7 application; an environmental impact assessment used to accompany a USACE Permit application; and an Essential Fish Habitat/Endangered Species Act assessment for the project area. The Transmission Services Team identified key areas of environmental concern and applied advanced GIS digital mapping technologies to plot cable corridors that would satisfy key regulators and minimize potential environmental effects.
ENVIRONMENTAL COMPLIANCE MANUALS
WESTERN AREA POWER ADMINISTRATION (WESTERN)

Berger assisted Western with updating its user manuals for guidance and use by regional environmental offices for environmental regulatory compliance. Technical information, methods, industry standards, points of contact, and regulatory requirements had changed since the manuals were last written and updated. The manuals Berger helped update were the Water Resources Guidance Manual, Pest Control Guidance Manual, and the Integrated Vegetation Management Environmental Guidance Manual.

Berger assisted Western in preparing a formal transmission integrated vegetation management plan that documented Western’s objectives, practices, approved procedures, and work specifications. The plan included a schedule for aerial and ground right-of-way vegetation inspections based on the anticipated growth of vegetation and other environmental/operational factors that could impact vegetation near Western’s transmission lines.

Berger assisted with documenting all of the personnel directly involved in the design and implementation of Western’s Integrated Vegetation Management Program to make sure those personnel had the appropriate qualifications and training to perform their duties. Berger assisted Western in demonstrating that it meets the requirements of the North American Electric Reliability Corporation’s Reliability Standard FAC-003-1—Transmission Vegetation Management Program.

COUNCIL BLUFFS ENERGY CENTER TO GRIMES 345-kV TRANSMISSION LINE
MIDAMERICAN ENERGY

Berger contracted with MidAmerican Energy to complete archaeological surveys for selected segments of a proposed 125-mile, 345-kV transmission line extending through portions of nine Iowa counties. The archaeological surveys were designed to examine areas considered to have high potential for unreported archaeological resources, so they might either be avoided during construction or monitored for inadvertent discoveries during construction. Berger archaeologists performed a records review to identify previously reported sites in the project corridor and used this information to guide field inspection of similar landforms for unreported sites, including unmarked cemeteries. Surveys were conducted for a 2.5-mile-long segment over the Middle Raccoon River valley in portions of Dallas and Guthrie counties. An additional survey was conducted before several existing support structures were replaced. Based on survey findings, Berger recommended archaeological monitoring during construction at several proposed structure replacements along portions of the Raccoon River near Des Moines, but no significant resources were encountered.
Representative Electric Utility Transmission Clients

Allegheny Energy
Alliant Energy
American Electric Power
Central Iowa Power Cooperative
Chariton Valley Electric Cooperative
Clarke Electric Cooperative
Dominion Virginia Power
Eastern Iowa Light & Power Cooperative
Federal Energy Regulatory Commission
FirstEnergy
Georgia Power
GenPower
Green Mountain Power
MidAmerican Energy
National Grid
Nevada Power
New York Power Authority
Northeast Missouri Electric Power
PacifiCorp
PPL Electric Utilities
Potomac Electric Power
Public Service Electric & Gas
Southern California Edison
Vermont Electric Power
Western Area Power Administration
Xcel Energy
TRANSMISSION SERVICES
ROUTE SELECTION
PERMITTING
& REGULATORY SUPPORT

Statement of Qualifications

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