



THE SPEAR GROUP

WE PROVIDE PROFESSIONAL SERVICES

ELECTRIC UTILITY SUPPORT

The Spear Group's involvement in the electric utility industry dates back to its inception in 1981. Today, we provide our electric customers with world class project management, planning, project controls as well as project closeout expertise in distribution, transmission and substation buildouts. The Spear Group also specializes in areas such as design, engineering, maintenance, inspection, quality control, and various other services necessary to succeed in the electric utility industry.

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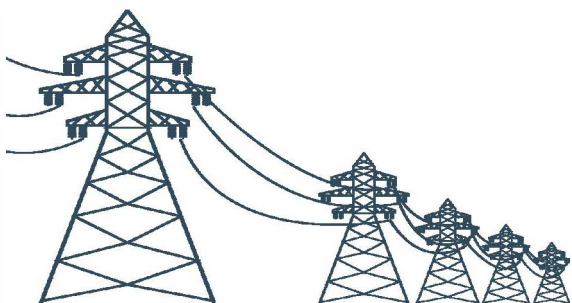


ELECTRIC UTILITY INDUSTRY CHALLENGES

As the power and electric utilities continue on the path to massive transformation, they are continuing to face constant change and challenges – both from internal and external sources. With these changes come many challenges for the industry in general. Leaders in the industry are constantly trying to find solutions to these challenges if they are to succeed.

Electric power companies have adopted new technology to serve an increasing sophisticated customer base who in turn are beginning to demand choices in power sources such as solar, wind and other renewable sources of energy. Consumers are also demanding better control over their energy usage. On the generation side, the displacement of coal-fired plants, availability of cheap natural gas and new sources of energy such as solar and wind and their integration into the electric grid are challenges that need to be dealt with.

Fast Fact: Between 2013 and 2017, investor-owned electric companies invested \$125 billion (in nominal dollars) on the U.S. distribution system!



• **Complex Projects:** Utility Infrastructure projects today are becoming more and more complex, requiring coordination of hundreds of devices, spanning multiple states and requiring teams located in different areas all around the globe. Thus, tracking of projects in realtime across multiple locations and between various project teams is becoming the key to ensuring project success and completion on time and within the budget. This is no easy or small feat with annual capital budgets into the billions and thousands of projects delivered each year.



• **Upgrade of Aging Grid Infrastructure:** A key challenge for Power Transmission and Distribution is the upgrade of an aging infrastructure required to meet the ever-increasing energy demands. With billions of dollars to spend and hundreds of projects, the need for proactive capital program management to structure long-range plans and maximize performance during project execution becomes even more crucial. Modernization of the power grid to make it smarter and resilient. The Spear Group is involved in many such smart grid projects across the nation.

• **Changing Regulatory Framework:** With regulatory compliance requirements becoming rigid and complex, and increasingly stringent outage requirements, there is now more than before a need to have infrastructure build projects completed on time and an ever-increasing need to keep within the allocated budget.

• **Constrained and Aging Workforce:** With many in the industry retiring, much of the institutional knowledge is disappearing and the search to find younger employees with experience is more challenging than ever. As a result, there is an increasing need to manage these large projects effectively across the lifecycle in order to prevent costly errors that could result from lack of knowledge and expertise. Many utilities require additional outside support to manage and work on new capital projects, and these projects are increasingly complex.

• **Integration of Renewable Energy Sources:** Integrating renewable energy sources into the existing grid is gaining a lot of interest. Utilities will need to provide their customers with options for renewable energy sources such as solar and battery storage. Utilities will need to adapt their business models as these new sources of energy come into play and need to be integrated into the grid. As such this will require a massive amount of planning for the utilities.

• **Budget and Schedule Overruns:** Overspending and overruns on big infrastructure projects is very common when projects are not managed carefully with best industry practices. In many cases, the gap between projections and performance can be significant. Per year, the average megaproject is delivered 35% over budget and two years behind schedule. Since upgrades to aging infrastructure and new builds are designed to meet our future energy needs, stimulate economies, create societal benefits and support long-term growth, it is crucial that these infrastructure projects are managed to succeed.

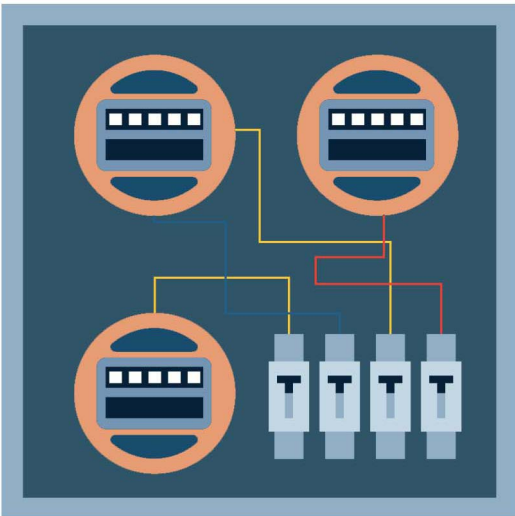
So.. How can The Spear Group assist Electric Utilities?

Things we must consider when executing large infrastructure projects:

- How do the various teams in the field collaborate with the engineering department?
- How are the material, right of way, permitting, and other construction challenges and changes communicated back to the design and project management teams?
- Do the field teams have access to the latest documents? How are the various field updates handled?
- How sophisticated is your project control and project management system?
- How do you track actual spend vs. budgeted spend?



Fast Fact: As of December 31, 2018 the total installed generating capacity was 1,202,783 megawatts (MW).



These challenges mentioned above are creating a perfect storm that utility leadership must navigate carefully. More so than ever, stakeholders are now demanding better transparency, improved performance and risk minimization on capital projects. To supplement their internal expertise, extend their capabilities and stay ahead of market needs, utilities will need to enlist trusted external service providers for needed support and industry knowledge.

We assist our clients by prioritizing their investments, making project-related decisions, and adding efficient, repeatable processes to virtually any area of their operations. We are active in multiple projects in the deployment of smart grid technologies. Our long history, experience and expertise in project and process management enables us to deliver results for our customers every time. In this way, The Spear Group embodies and promotes a culture of continuous improvement as projects are completed and new programs are launched.

The Spear Group is a firm believer in integrating innovation and technology into everything it does. We use technology to drive capabilities and effectiveness. Our employees are constantly learning new technology, applying technology and integrating this into day-to-day tasks, problem-solving skills, sharing ideas. It is with this mindset that we come and intentionally build lasting partnerships with our clients. In this respect, the Spear Group is leading the way in the industry with best practice project management and controls.



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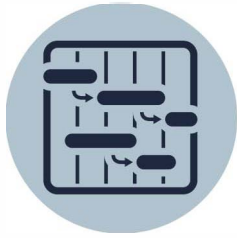


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We can assist in the following areas:



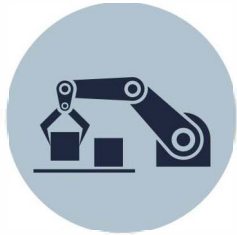
Navigating Multiple Projects

The Spear Group can help you meet the challenges of managing multiple projects. Most large projects involve many entities with many areas of expertise. We can assist in the project management role while also bringing knowledge of new technologies, their uses, and related vendors. We can help you finish your projects on time and within budget by monitoring the project during detailed design and construction, while at the same time providing functional direction when necessary. Acting as Project Leaders and Liaison for the project team and the client's Senior Management and Contractors, The Spear Group is able to set expectations with stakeholders; manage and escalate risks appropriately while at the same time ensuring that all projects follow the delivery process, so results meet industry and client standards in support of revenue goals.



Project Analysis

The Spear Group has considerable expertise in reviewing, verifying and analyzing information related to one or more Project Control support areas (cost, schedule, estimating and earned value). Our experts will measure the effect of such information on the performance of the functional area.



Construction Management and Administration

The Spear Group can provide you with full service contract administration, including contract preparation, facilitation of pre-bid meetings, bid letting, evaluation, recommendations, and coordination of contract execution for all your capital construction projects. Our employees have considerable expertise in the preparation of construction labor bid packages utilizing contracts, as well as other related RUS documents. In addition, The Spear Group works closely with your staff to ensure that a complete and comprehensive contract is prepared for your projects. Acting as the owner's advocate / agent / representative managing subcontractors, Architect and Engineer (AE) agencies and Construction Management (CM) firms, we have the right expertise to oversee and coordinate project initiatives and field construction activities



Document Control Administration

The Spear Group has considerable expertise in document control administration. Our experts can recommend and implement Document Control Systems and provide direction and expertise in the processing, release, reproduction and retention of design documents, vendor documents and turn-over packages. Our on-site personnel quickly become knowledgeable of department / corporate policies and procedures essential to prompt resolution of queries and conflicts.



Cost Engineering and Estimating

The Spear Group can develop, set-up and perform cost forecasting, Preparation of cost, performance and productivity reports, set-up and perform estimating activities and prepare and review of estimates.



Construction Management and Inspection

From the on-site pre-construction meeting with the multiple contractors all the way through final inspection and project closeout, The Spear Group has solid experience to assist you with construction management. We can provide on-site representation and inspection services throughout the project to ensure that the final deliverables are completed on time, on budget, and in accordance with your specifications. We can also provide as-built documentation, labor invoice approvals, and final project closeout documents as required.



Project Controls

The Spear Group can work with you to develop, set-up and perform cost forecasting, planning and scheduling, monitoring and control activities. Our employees have broad expertise in the preparation of cost, schedule, performance and productivity reports, analysis of supporting data, variance reporting and special studies.



Planning and Scheduling

Our experts can work with you to perform schedule development, maintenance, monitoring, and control activities, prepare plans and schedules, performance reports, analysis of supporting data, variance reporting, and other special studies as required.



Permitting, Licensing and Right of Way Acquisition

The Spear Group has the right expertise to assist you in one of the most critical aspects of any major overhead or underground line construction project. We review and obtain all the necessary right-of-way (R/W), utility easements, various permits, and licenses (including environmental, state, county, township, railroad, etc.) for construction of your facilities.

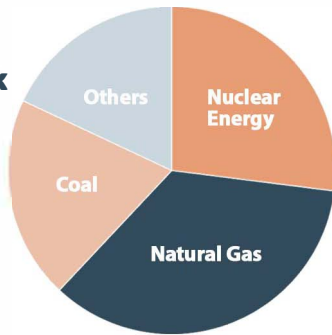
Our current portfolio of projects and areas of expertise include:

Distribution

- System Expansion
- Storm and response follow up
- Submarine cables
- Overhead to underground conversions
- Vegetation line cover programs

2018 National Fuel Mix

Coal = 27%
Natural Gas = 35%
Nuclear Energy = 20%
Others = 18% (hydropower and renewables)



Transmission and Substation

- Installation/new build of substations
- Installation of new high voltage main lines
- Replacement of old structures
- GSU transformer start ups
- Expansion of substations
- Installation of new transmission lines
- Rebuilding of transmission lines
- Transmission upgrades and grid interconnects



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The Spear Group has a long history, as well as experience and expertise in project and process management in the utility industry, enabling us to deliver results for our customers every single time. This allows the Spear Group to become a trusted partner and promotes a culture of continuous improvement as projects are completed and new programs are launched.

www.speargroup.com

Southern Cross

Southern Cross Inc. has been a leader in utility field services since its founding in 1946. The aim of our company is to partner with natural gas, electric, water, and oil utilities to ensure mutual success with our partnerships. We offer a wide range of utility services, professional services and advanced technology solutions.

www.southerncrossinc.com