

# Utilities Tech Outlook

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JULY - 01 - 2020



Power Consulting Engineers

**TRANSMISSION  
AND DISTRIBUTION  
CONSULTING/SERVICES  
COMPANIES** 2020



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*The annual listing of 10 companies that are at the  
forefront of providing Transmission and Distribution  
Service consulting / services and transforming businesses*

# Power Consulting Engineers Experts in Electric Substation Design



Daryl Dunahoo

Electric cooperatives are independent, private electric utilities owned by their serving members. They are firmly anchored in the communities they serve and ensure that they are closely regulated by their consumers. Originally created after President Franklin D. Roosevelt established the Rural Electrification Administration (REA) in 1935, electric cooperatives have helped bridge the vast expanse of rural America. They have thus brought electric power to businesses and communities that are willing to organize cooperatively and work responsibly to ensure the provision of safe, affordable, and reliable electric power. Unfortunately, many electrical cooperatives, in general, do not have the internal expertise to handle some of the more technical aspects of the final mile of the electricity transmission journey—substation design. They lack the background and experience necessary, especially in the

protection and control aspects of power substation design. Founded in 1998, specialized in electric substation design and related services, Power Consulting Engineers (PCE) started as a specialty consultant to these electric cooperatives. The company has grown to serve IOU's, municipal utilities and industrial clients over much of the Eastern half of the United States.

PCE's team consists of electrical engineers who start every project with a detailed client kickoff questionnaire that is completed together between the client and PCE. This process of completing the questionnaire leads to training and discussion with clients regarding physical and protection and control options for their substation. After receiving the answers to their list of questions, the team can better understand the client's specific needs. The level of detail covered in the questionnaire helps makes the process smooth

during the design and construction phase of a substation. PCE will then allocate a dedicated team to the project, who will discuss ideas and concepts and create a set of preliminary drawings that answer the client's requirements. The client can then review these drawings and give their feedback. "Based on the clients response, PCE makes the necessary modifications", says Daryl Dunahoo, CEO of PCE. PCE uses advanced project management tools to assign and monitor progress of all the internal tasks assignments. This helps streamline the design process and enables the client to review the project's status at any stage. Later, they



“**For more than 20 years, Power Consulting Engineers has grown by providing quality service at a reasonable price. Our attentive Professionals, design standards and quality control and Project Management systems produce a consistent high-quality product while keeping costs in check so our clients always come back for more**”

proceed to specify the various material procurement stages for the construction phase, pending the client's final approval.

PCE will then monitor the work of the contractors building the facility per the design specification—partnering with civil services firms—through the entire construction phase. In the end, the company performs the commissioning and inspection of both the physical and protection and control aspects of the project to ensure everything is functional and ready to go. Additionally, the company provides sectionalizing studies, coordination studies, arc flash studies,

work plans, and SPCC (spill prevention, control, and countermeasures) plan for its clients, and offers relay and battery testing services as well.

With its exemplary services and straightforward process, the company has won the hearts of many a client. Their success is best exemplified in one particular case, where PCE worked on over two dozen substations projects for a client. Doug Trotter, COO of PCE, recalls the time when he had the kickoff meeting with the client and spent the whole day discussing the details of one project. The client was struggling to

upgrade and modernize their system and had very poor reliability ratings due to a past mentality of putting out fires instead of really improving the system. Understanding the whole situation, PCE helped them establish a timeline and guide for improving and modernizing their systems and enhancing reliability. Today, the client covered the journey from being one of the worst systems in the country to one of the best improved. After the successful completion of one project, the company got 24 more projects from the same client.

With many such riveting customer success stories under their belt, the substantially growing PCE is continuously trying to refine and improve their consulting and design services to make them more efficient. With the technological advancements in the power industry, PCE is continually upgrading its knowledge, adding services, and developing new schemes to stay leaders in the industry. "We do not aim to double the size of our company, but to steadily grow by exceeding our client's expectations, adding new services, enhancing the processes, and evolving with technology changes," concludes Dunahoo. 🚀