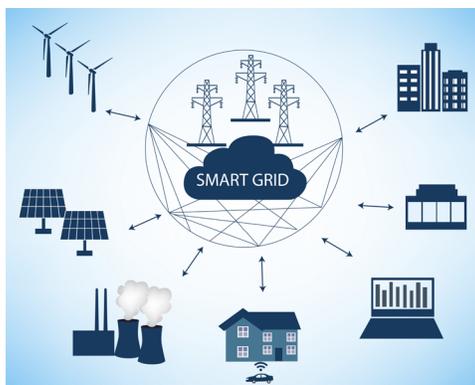




## SMART GRID DESIGN & CONSULTING

Patterson & Dewar Engineers, Inc. (P&D) understands that smart grid and related technologies play an important role in day-to-day operations and that utilities would like to implement the highest value applications and industry best practices to better serve their customers/members. P&D's experienced staff helps utilities and governments evaluate their smart grid and operations infrastructure, offers objective advice on technology solutions to address the organization's goals, and leads the implementation as a trusted partner from concept to final acceptance.



## SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)

P&D designs and implements SCADA systems to manage remote equipment throughout a service territory from one or more control centers. We closely collaborate with your company's personnel to identify goals and objectives, provide independent recommendations for selecting the right products, and assist with deployment so that your staff can take ownership of the final system. Our specialists have deep domain knowledge of modern and legacy SCADA protocols, IED configuration best practices, security standards, and project management methods to help ensure a successful outcome.

## COMMUNICATIONS

Utility and industrial communications systems typically use a hybrid of technologies to handle different geographic and data transfer needs. Fiber optic, RF, and complex wired networks all have a place in modern electric power monitoring and control. Clients call P&D for design, objective analysis, and guidance on making the best use of existing communication systems while bringing on new and ever-evolving technologies.

## POWER SYSTEM AUTOMATION

Automation technologies address any power delivery organization's fundamental needs – which are to see the future with broad situational awareness and react to problems as soon as possible. Our experts dive deep into the many “moving parts” to assess how they form the integrated system. P&D develops decision-making processes and operations assistance tools using control center applications, substation computers and IEDs, downline automation controllers, and other smart devices in concert with the communication infrastructure.



### OUR LOCATIONS

#### Georgia

850 Center Way  
Norcross, GA 30071  
(770) 453-1410

#### Tennessee

1531 Hunt Club Blvd.  
Suite 200  
Gallatin, TN 37066  
(615) 527-7084

#### Texas

15924 Midway Rd.  
Addison, TX 75001  
(214) 461-0760

#### Virginia

4511 Daly Dr.  
Suite I  
Chantilly, VA 20151  
(571) 299-6773

#### Arizona

1525 North Hayden Rd.  
Suite 100  
Scottsdale, AZ 85257



## DISTRIBUTED ENERGY / MICROGRIDS

For distributed energy resources, especially solar PV, numerous technical and contractual challenges dictate a balanced approach if all of the advertised benefits, such as lowering wholesale bills, customer partnerships, and sustainability goals, are to be realized. Microgrids are all about power system reliability and getting the most out of on-site generation. A microgrid contains all the components of the “macro-grid” – generation, distribution lines, load balancing, protection, and economic dispatch – encapsulated in a smaller area. Our team of planning, substation, distribution, civil, and automation engineers possess a wide range of skills that are critical for a successful alternative energy project.

## BEST PRACTICE ASSESSMENTS

All companies, including power delivery organizations, should implement processes for getting day-to-day work complete. Cultivating fresh ideas for the same process can be especially difficult when the team is dedicated to the routine. The best antidote to this situation is an independent assessment by a trusted advisor with a broad view of industry best practices. Our experts can break through internal barriers by offering in-depth knowledge and new perspectives. Our best practice assessments include:

- Technology roadmap
- Power system automation opportunities
- SCADA examination and recommendations
- Cybersecurity
- Field review of devices, settings, and configurations
- Communication architecture and matching throughput to needs
- Application integration improvement to realize maximum capabilities



## TECHNICAL SPECIFICATIONS / PROCUREMENT ASSISTANCE

When a utility wants to deploy a complex system, such as advanced metering infrastructure (AMI), SCADA, or distributed energy, where to start and how to get to the desired outcome can seem daunting. Sorting through the myriad of vendor claims and options as well as constructing a specification that captures functional, financial, and operational goals requires careful consideration and experience. The P&D process involves collaboration with all stakeholders up front, industry knowledge to select the most qualified suppliers, and objective comparison of responses leading to a justifiable recommendation.

For more information, please contact [smartgrid@pdengineers.com](mailto:smartgrid@pdengineers.com)

