

## BUSINESS AND TECHNOLOGY SOLUTIONS FOR THE ENERGY AND UTILITIES INDUSTRIES

### BUILDING A SMARTER, GREENER POWER GRID.

- ◆ Are you prepared for the major changes in demand over the next few years as consumers increasingly turn to plug-in hybrid and electric vehicles?
- ◆ Do you have a sound strategy in place for moving loads from peak to off-peak periods?
- ◆ Have you considered Smart Grid and Advanced Metering Infrastructure technologies but aren't sure of the right direction for your business and needs?
- ◆ Do you know how you will build, manage, and pay for a Smart Grid?
- ◆ Which Home Area Network (HAN) strategy will deliver reliable results in the short term but allow for innovation and an eco-system of suppliers to evolve?

### MAKE THE RIGHT COMMITMENT TO SMART GRID.

Over the next decade, most electric utilities in the United States will apply Smart Grid and Advanced Metering Infrastructure technologies in order to:

- ◆ Support a variety of time-of-use (TOU) pricing plans to residential, commercial, and industrial customers
- ◆ Operate more efficiently
- ◆ Reduce line losses in their distribution networks
- ◆ Increase the reliability of their distribution networks
- ◆ Support distributed and renewable generation solutions such as solar and wind
- ◆ Handle the additional electrical load that charging plug-in hybrid and electric vehicles will put on their networks

But, in building these "smart" networks, utilities are committing to a foundation of technology and vendors that must be able to support their operations for many years. With the stakes high and the options many, how can you be sure you are moving forward with the right solution?

### SEEK THE RIGHT EXPERIENCE.

Smart Grid and Advanced Metering Infrastructure (AMI) projects apply new information technology, communications, and automation technology to your existing grid—enabling you to manage operations remotely and seamlessly to achieve key goals. Smart Grid and AMI components are technically challenging, requiring not only industry expertise, but significant experience in:

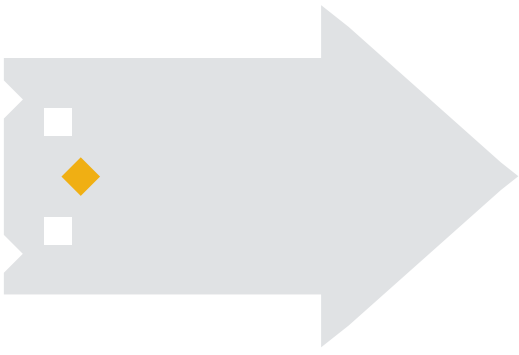
- ◆ Wireless communications (Point to Multipoint, Mesh, Microwave, WiMAX, Wi-Fi, EVDO, GPRS, HSDPA, MAS, 2-Way voice/data radio, etc.)

- ◆ Leased circuit and fiber communications
- ◆ IP engineering and security
- ◆ Process automation
- ◆ New and evolving enterprise applications
- ◆ Large-scale project management

If you are considering or beginning a move to a Smart Grid, take a look at West Monroe Partners. We specialize in optimizing the business processes and system selection and implementation that enable your peak performance.

West Monroe Partners brings a wealth of experience in the energy and utilities industries, along with expertise in key disciplines that comprise an effective Smart Grid solution:

- ◆ Wired and wireless communication technology
- ◆ Information technology infrastructure and components
- ◆ Distributed generation
- ◆ Demand response
- ◆ Security designed into the solution from the beginning
- ◆ Consumer program development and delivery
- ◆ Integrated project management and quality approach for all project phases
- ◆ Business intelligence tools to manage deployment, track goals, and identify issues



## ENERGY & UTILITIES SOLUTIONS

### AUTOMATE OPERATIONS THROUGHOUT THE GRID.

West Monroe Partners can help you achieve automation throughout your grid, including:

- ◆ Automating substations—establishing remote control, improving monitoring capabilities, and transferring feeder circuit from one substation to another
- ◆ Automating distribution switches—isolating faults, restoring services to customers quickly, and enabling transfer of feeder circuits between substations
- ◆ Monitoring and trending power quality along the distribution network through distribution components, Smart Meters, and sensors
- ◆ Establishing centralized capacitor controls—improving power factor and lowering line losses
- ◆ Establish distributed generation—switching interruptible power sources on/off the grid and integrating renewable power sources

West Monroe Partners also can assist you with:

- ◆ Automating meter reading and controls—identifying outages, load profiles, remote connect/disconnect of customers and power quality measurement
- ◆ Establishing two-way communication to grid devices
- ◆ Reducing idle reserve capacity through real-time demand response, pervasive two-way communication, and closed-loop control to reduce load quickly

### ONE SIZE DOES NOT FIT ALL.

Smart Grid is a solution of many parts—each one customized to meet a utility's specific needs. A well-designed master plan is essential; therefore, a successful Smart Grid initiative begins with a thorough assessment of needs and goals. As part of this assessment, West Monroe Partners works with your executive team to define high-level organizational and customer benefits such as:

- ◆ Energy savings through customer-targeted efficiency and demand-response programs
- ◆ Distribution network enhancements that enable efficiency, reliability, and distributed generation
- ◆ Energy savings by reducing network losses
- ◆ Reduced carbon emissions
- ◆ Identification and quantification of societal benefits

Based on this assessment, we then help you:

- ◆ Formalize a Smart Grid vision, including defining the components required to achieve your vision
- ◆ Prepare a cost/benefit analysis
- ◆ Create a business case and funding proposal

### SUPPORT THROUGH SUCCESSFUL IMPLEMENTATION.

West Monroe Partners can help you bring your Smart Grid vision to fruition.

#### Select the Right Vendors and Solutions.

- ◆ Document requirements
- ◆ Prepare Requests for Proposal for various solution elements, including AMI, communication systems, IT systems, Smart Meters, HAN devices, and other Smart Grid automation components
- ◆ Conduct vendor and technology assessments

#### Develop and Deliver Customer Programs.

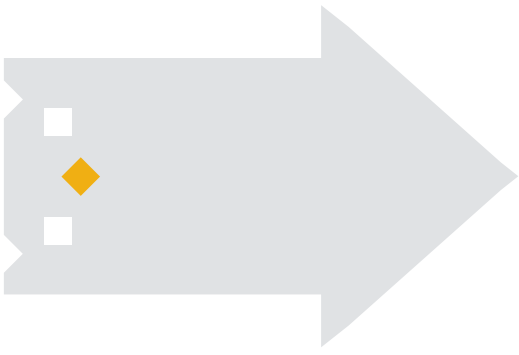
- ◆ Assess customers' socioeconomic status, environmental awareness, and propensity toward the green movement
- ◆ Create programs tailored to your customers and goals
- ◆ Develop communication strategies
- ◆ Monitor program results and make adjustments

#### Implement the Smart Grid Vision.

- ◆ Develop a comprehensive implementation plan
- ◆ Establish and manage a program management office
- ◆ Manage implementation plans
- ◆ Coordinate field deployment
- ◆ Execute grid and back-office integration, as well as IP network and security projects
- ◆ Design and implement change management plans
- ◆ Design and implement business intelligence tools to manage deployment of the network, progress toward your goals, and comply with key performance metrics

#### Train Employees.

- ◆ Develop and deliver educational programs covering broadband, communications, AMI, automation technology, and wireless technology



## ENERGY & UTILITIES SOLUTIONS

### **Integrate Infrastructure in a Merger or Acquisition.**

- ◆ Assess both organizations' IT operations and Smart Grid initiatives and create integration recommendations
- ◆ Execute integration plans for technology and people

### **A WIN-WIN PROPOSITION FOR CUSTOMERS AND UTILITIES.**

A well-designed, efficiently executed Smart Grid initiative benefits both utilities and end customers. Customers can lower the growth of utility spending, while utilities can achieve a variety of operational and business goals, including:

- ◆ Understanding and managing demand proactively in order to improve reliability and network utilization and reduce peak energy costs
- ◆ Creating rate plans that provide customers with choices and encourage them to shift energy use to non-peak periods—for example, charging their cars during off-peak hours
- ◆ Minimizing needs to purchase electricity from other utilities in order to satisfy peak demand
- ◆ Integrating distributed and renewable energy sources

Does your utility have an achievable Smart Grid vision? Are you confident that you can turn that vision into real benefits? With practical experience across all facets of Smart Grid design and implementation, West Monroe Partners can help you deliver. And, help you put your organization at the forefront of the movement toward building smarter, greener utility grids.

That's business in the right direction.

- West Monroe Partners is an international, full-service business and technology consulting firm focused on guiding organizations through projects that fundamentally transform their business. With the experience to create the most ambitious visions as well as the skills to implement the smallest details
- ◆ of our clients' most critical projects, West Monroe Partners is a proven provider of growth and efficiency to large enterprises, as well as more nimble middle-market organizations. Our more than 300 consulting professionals drive better business results by harnessing our collective experience across a range of industries, serving clients out of offices across the United States and Canada.
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