**OPTIMIZE YOUR DISTRIBUTION GRID**

Black & Veatch provides planning and deployment solutions for advanced applications that enhance the reliability, efficiency and performance of your electric distribution grid.

Taking steps to optimize the distribution grid will yield the desired benefits in operational savings and system performance today and will modernize the grid to address the complexities and demands of the future. By installing and automating intelligent, controllable devices on the distribution grid, utilities also improve operator awareness of the grid, which is rapidly becoming more complex to operate. Black & Veatch offers broad expertise for implementing distribution optimization applications to improve the operational performance of the grid today and allow utilities to make more informed decisions about maintenance of the system in the future.

**DISTRIBUTION OPTIMIZATION APPLICATIONS**

Utilities only need one partner for the optimization of their distribution grid, and that’s Black & Veatch. From the operations control center to the intelligent grid devices installed in the field, Black & Veatch provides end-to-end implementation and integration services for all technology and network applications. Our utility automation professionals work side-by-side with our network engineers, ensuring each technology solution is aptly supported by an advanced communications network.

With a single partner to manage, deploy and integrate your distribution optimization solutions, utilities are assured a seamless and efficient system implementation.

- Substation SCADA Integration/Automation
- Distribution/Feeder Automation
- Integrated Volt/VAR Control and Optimization
- Distribution System Sensor Integration
- Distributed Energy Resource Integration
- Demand Response Control

With broad expertise in automation systems and communication network deployment, Black & Veatch has the qualifications and experience to assure that utilities experience successful deployment and integration of their distribution applications.

Most of the direct savings and system optimization in the future will be driven by distribution upgrades. Black & Veatch is designing, installing and integrating advanced automation systems and communication networks for leading utilities.
OPTIMAL DEPLOYMENT OF ADVANCED DISTRIBUTION APPLICATIONS

PROGRAM AND PROJECT MANAGEMENT SERVICES
Black & Veatch applies proven program management methodologies and ISO-certified quality management processes gained from traditional, large-scale energy projects, multisite telecommunication projects and intelligent distribution programs.

- Project Scope, Schedule and Budget
- Project Management and Execution Plan
- Deployment and Quality Management

CONSULTING ENGINEERING SERVICES
Technology advancement gives way to numerous scenarios and solutions for optimizing the grid. Our consulting engineering tools and methods are designed to help utilities select a path that leads to the greatest regulatory, operational and consumer benefits. This includes the hardware, software, services, processes and people that are required to achieve operational excellence.

- Vision, Conceptual Design and Architecture
- Technology Assessment and Solution Selection
- Power System Planning and Design
- Power System Studies

ENGINEERING SERVICES
Black & Veatch designs automation schemes and communication network solutions needed to integrate distribution optimization technologies. This ultimately improves monitoring and control capabilities at the control center, and increases reliability and efficiency of the distribution system.

- Distribution Automation Scheme Design
- Distribution Automation Controller Configuration
- Substation Automation and Integration
- Substation SCADA RTU Design and SCADA Master Configuration

PROCUREMENT AND CONSTRUCTION SERVICES
Black & Veatch is a leader in power delivery system construction. Our installation and testing expertise as well as material management abilities have been refined over thousands of projects.

- Vendor Selection and Management
- Equipment and Material Logistics
- Construction Management
- Contractor Management
- Installation, Testing and Commissioning

TELECOMMUNICATIONS NETWORK SERVICES
Black & Veatch designs and deploys the network infrastructure that is foundational to an intelligent distribution grid, delivering a complete, integrated solution from control center to field devices. Our solutions include Wide Area Networks, Local Area Networks and Field Area Networks connecting enterprise campuses, offices, service centers, substations, and distribution field devices for optimal operation and management of the electric system.

- Network Planning and Design
- Network Assessment and Coverage Study
- Cyber Security Design and Implementation
- Construction, Installation and Testing

DISTRIBUTION MANAGEMENT SYSTEM SERVICES
Black & Veatch provides utilities with added insight into deploying Distribution Management Systems and advanced distribution application systems for improving operation of the distribution system. By keeping informed of the latest advanced applications, we help build customized solutions that meet a utility’s specific business drivers.

- Business Case Development
- Requirements Development
- Conceptual Design and Architecture
- Vendor Selection and Procurement Strategy
- System Configuration, Integration and Data Management
- System Installation, Testing and Commissioning
BUILDING A WORLD OF DIFFERENCE®

Black & Veatch is an employee-owned, global leader in building Critical Human Infrastructure™ in Energy, Water, Telecommunications and Government Services. Since 1915, we have helped our clients improve the lives of people in over 100 countries through consulting, engineering, construction, operations and program management. Our revenues in 2011 were US $2.6 billion. Follow us on www.bv.com and in social media.

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