

Envisioned as an Internet for energy, the Smart Grid will provide a reliable infrastructure supporting energy-monitoring devices in homes, business, and across the power grid. These devices will serve as the basis for an energy nervous system that will enable the monitoring and conservation of power usage, the detection of grid flaws, the quick restoration of power during outages, and the integration of new clean-energy solutions. To build the Smart Grid, utilities will need to partner with organizations that have in-depth knowledge of Information Technology, including networks, wireless technologies, information security, and IT project management. NYSTEC provides all of these capabilities and more.



Since 1995, our experienced staff of project managers, engineers and technologists has enabled many clients — including utilities, government agencies, and institutions — to harness the power of the Internet and other advanced technologies such as AMI (automated metering infrastructure), networking technologies, land mobile radio, and information security. With nearly 15 years of experience providing technology acquisition support, project management, and quality assurance, NYSTEC is poised to assist utilities, government, and other stakeholders with planning and integrating new Smart Grid technologies.

Technology Acquisition Support

NYSTEC has assisted a wide array of clients with the acquisition and integration of new technology systems. From the very start of a project to its completion, we offer support for utilities procuring new Smart Grid technologies and systems, including:

- ❖ Requirements Definition
- ❖ Project Planning, Project Scoping, & RFP Development
- ❖ Vendor Evaluation
- ❖ Project Management & Monitoring
- ❖ Quality Assurance



Smart Grid Security

With development of the Smart Grid, our energy infrastructure will benefit from the same advances that produced the Internet. However, just like the Internet, the Smart Grid will be vulnerable to attacks from malicious parties. NYSTEC will work with utilities to plan and implement security measures at each phase of a project's engineering life cycle, and to protect the grid on an ongoing basis. Our personnel have been certified by the National Security

Agency (NSA) and Committee on National Security Systems (CNSS) to provide security training to clients. In addition, we offer the following security services:

- ❖ Cyber Security Planning, Implementation, & Ongoing Assessments
- ❖ Interpretation & Compliance with NERC-CIP, NIST Standards/Requirements, & Other Emerging Standards
- ❖ Vulnerability / Risk Assessments & Countermeasures
- ❖ Information Security Policy, Processes, Standards, Procedures, Audits, & Training
- ❖ Security Application & System Development, & Design Reviews
- ❖ Technology & System Acquisition
- ❖ Identity & Access Management
- ❖ Business Continuity / Disaster Recovery Planning & Assessments

Automated Metering Infrastructure

NYSTEC is currently assisting a large municipal agency to deploy the nation's largest Automated Metering Infrastructure project. With more than 850,000 meters, the agency tapped NYSTEC to assist with:

- ❖ Vendor Negotiations
- ❖ Contract Development
- ❖ Engineering Design
- ❖ Quality-assurance Monitoring



Networking



NYSTEC has the depth of experience to help utilities determine the best combination of network strategies and technologies to build the Smart Grid. Our engineers have advised clients across the complete spectrum of networking and telecommunications technologies, including LANs, WANs, wireless (Wi-Fi and WiMAX), cellular, PCS, radio, VoIP, private networks, Ethernet, frame relay, fiber, and wide-ranging telecommunications systems. Our services include:

- ❖ Network Planning
- ❖ Network Design
- ❖ Infrastructure Reviews
- ❖ Implementation of Design Processes
- ❖ Advice on Wireless & Wireline Technologies

Communications

NYSTEC has extensive experience with wireless and wireline communications systems, including two-way radio systems, broadband wireless systems, and emergency communication centers. Our Smart Grid communications services include:

- ❖ Radio System Evaluations
- ❖ Radio System Design
- ❖ Radio Coverage Propagation Analysis
- ❖ Wireless Network & Site Assessments
- ❖ Communications Needs Assessments
- ❖ Spectrum Management & Regulatory Assistance



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