Cisco Builds Smart Grid Roadmap
Cisco Connected Grid Network Architecture Services connects utility transmission, distribution, and operations.

Case Study

Industry: Power Utilities
Location: United States

Business Impact:
Benefits delivered by the Cisco solution include:
• Alignment clarification among various smart grid projects
• Design of roadmap for future projects
• Consolidation of business and technical requirements
• Development of end-to-end network architecture

Business Challenge
Undertaking a smart grid transformation affects many areas of a utility’s business and operations. Each silo within a utility, including transmission and distribution, information technology, etc., often takes different approaches to the transformation. Projects can unknowingly overlap, leading to redundant wasteful budgeting, poor coordination of timelines, contradictory requirements, and misallocated resources.

A Cisco client was in the middle of multiple projects that each referenced different architectures, creating overlapping networks. For example, one network carried Supervisory Control and Data Acquisition (SCADA) traffic, while another carried IP video traffic from a substation to a control center. Putting these networks in place would have led to underutilization and higher costs. The multiple architectures would also have further entrenched the silo mentality and led to interoperability challenges. Reducing numerous network plans into a single architecture posed several challenges. Cisco identified the need to bridge gaps across the utility’s silos to create a comprehensive use case and requirements list, converge multiple networks, and develop the end-to-end architecture.

Solution and Results
Cisco engineers:
• Proposed a four-phase network architecture engagement
• Developed a comprehensive use case
• Analyzed business and technical requirements
• Created a single architecture for security, communications, Management, and operations
• Developed a project roadmap, detailing a future state architecture that allows for new technologies

Cisco Connected Grid Services
Cisco® Connected Grid Network Architecture Services invites utilities to prepare for the future through its comprehensive planning services that assess current strengths and weaknesses of their networks and provides the utility with options for optimizing current technologies or taking a different, more streamlined approach. The Cisco Connected Grid can automate the entire energy chain and dramatically increase grid reliability and responsiveness while lowering costs.

“Cisco was instrumental in empowering our team to achieve the best possible network architecture to guide current projects and prepare us for future projects.”

Director
Power Utilities Company