Electric utility IP backbone infrastructure supports existing and new business services.

Solution and Results
Cisco experts created an architecture based on the Multiprotocol Label Switching (MPLS) network, with “containerized” sub-domains to segment areas for business, utility, and enterprise:

- Converges multiple networks on a single network tier, connecting shared resources such as the data center and control centers
- Enables information transparency to help meet NERC CIP standards
- Augments “last-mile” access, based on end-to-end service-level agreement (SLA) metrics
- Maintains flexibility and ease of operations
- Optimizes operating expense savings, while adding flexibility to meet new business challenges
- Accelerates ability to expand future services and locations

Business Impact:
- Upgraded legacy IP backbone network to enable business growth
- Increased network availability through containerized services
- Secured, shared business and utility network resources
- Reduced CapEx/OpEx by converging network infrastructures
- Enabled NERC CIP compliance in the substation

Business Challenge
Electric utilities traditionally consist of isolated areas operating independently of each other. As the information technology footprint expands to the grid, however, many companies are realizing the need for a secure network platform that supports the entire utility environment, including business services (storage, telephony, video, physical security), control systems (synchrophasers or PMUs, C-RAS, supervisory control and SCADA networks), and smart grid monitoring technologies.

The Cisco® Connected Energy Services team worked with the business units of this large utility to gain a complete understanding of both current and planned services. These experts then developed a detailed network specification based on application characteristics, bandwidth, latency, security, and compliance with the North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) standard. This methodical process addressed the concerns and needs of both operations (T&D) and IT teams, laying the groundwork for a full set of network requirements.

Working together, Cisco and the utility also looked into the future to create an architecture and implementation roadmap for the new IP backbone network. A multistep migration plan was developed with the operations team to enable a phased approach that will minimize risk.

Cisco Connected Energy Services
Cisco Connected Energy Services partners with utilities to prepare for the future of the smart grid, helping to secure and automate the entire energy chain and dramatically increase grid reliability and responsiveness. Providing comprehensive planning services, Cisco experts assess your utility’s current position and capabilities, and provide innovative, cost-effective options for optimizing present and future investment.

Customer Name: Large Utility Company
Industry: Electric Utilities

© 2011 Cisco Systems, Inc. and/or its affiliates. Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco’s trademarks can be found at www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. [100938]