

# Optical Ethernet for Utilities

Force10 Networks' provides a secure, highly-reliable and cost-effective solution that enables Utilities to transition their optical network infrastructure to Ethernet.

## The Transforming Utility Communications Infrastructure

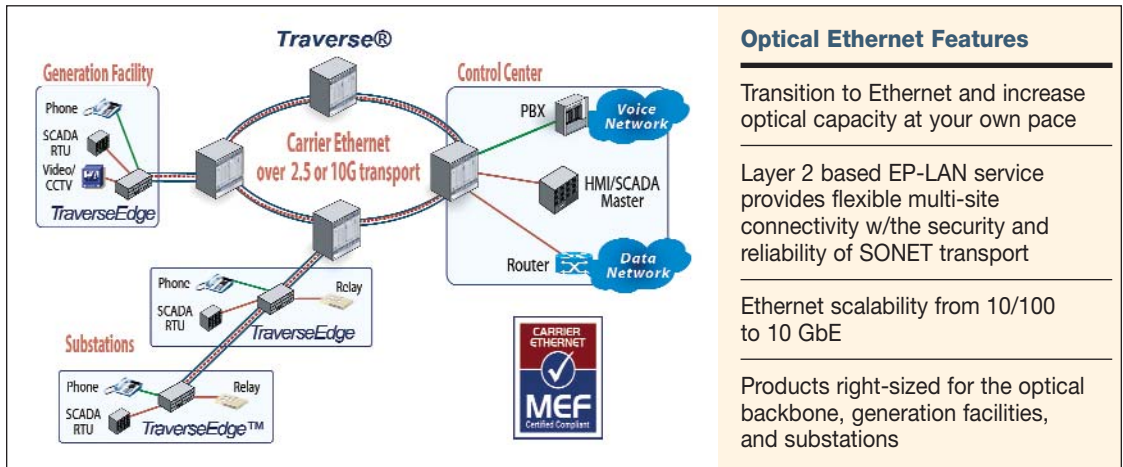
Electric, gas and water utility companies operate robust internal communications networks to support the critical infrastructure they provide to their customers and in their communities. Driven by regulatory mandates such as the NERC (North American Electric Reliability Council) cyber security standards, as well as trends toward IP-based smart-grids and substation automation, and the increased adoption of bandwidth-intensive applications such as video surveillance and BPL (Broadband over Power Line), these mission-critical networks are in need of a transformation to meet the demands of the 21st century.

Utilities are responding by increasing optical bandwidth capacity and migrating from TDM to Ethernet-based networks that support new IP-based applications more efficiently. Because NERC has raised concerns about security issues surrounding Layer 3, utilities are also increasingly showing a preference for Layer 2 based Ethernet solutions in all aspects of their communications

infrastructure including transport, corporate LAN/WAN and voice systems, microwave, and control systems.

## Optical Ethernet Solutions For Utilities

Force10 Networks' provides a full range of solutions designed to enable utilities to transition to Ethernet, and increase optical capacity. The Traverse® and TraverseEdge™ products integrate advanced Layer 2 Ethernet switching and SONET transport capabilities, optimizing them for deployments in high-capacity, self-healing optical networks that support the delivery carrier-grade Ethernet services. By implementing Force10's Layer 2 based Ethernet Private LAN (EP-LAN) architecture, utilities can efficiently and cost-effectively use dedicated SONET channels to build a multi-site switched Ethernet WAN that connects control centers, generation facilities, substations, and other locations over their optical transport network. In addition to delivering the inherent availability, reliability, security and QoS characteristics of the deployed SONET transport infrastructure, this architecture provides the flexibility and scalability advantages of switched Ethernet.



### Optical Ethernet Features

Transition to Ethernet and increase optical capacity at your own pace

Layer 2 based EP-LAN service provides flexible multi-site connectivity w/the security and reliability of SONET transport

Ethernet scalability from 10/100 to 10 GbE

Products right-sized for the optical backbone, generation facilities, and substations



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