

Tropos – Helping Communities Build America’s Smart Grid

Creating a Reliable, Efficient, Intelligent Electric Grid

GREENER, SAFER, SMARTER

Transforming the century old electric grid in our nation is one of the key goals of the American Recovery and Reinvestment Act of 2009 – this includes the entire infrastructure from alternative energy sources to meters in our homes and businesses, affecting not only the big power companies but every municipally owned utility

Smart Grid is a term referring to the modernization of America’s electric grid to make it more efficient, secure, reliable and resilient. At the core of the Smart Grid is a standards-based IP communication foundation that enables real-time two-way communications as well as broad coverage and scalability. With a common infrastructure, end-to-end management, control and monitoring of power from creation to the point at which it’s used, is possible. To realize the Smart Grid vision, all stakeholders involved in generating, transporting and delivering power to end-users need to become a part of the ecosystem.

SMART GRID APPLICATIONS AND BENEFITS FOR MUNICIPALITIES

- ❖ Automated Metering Infrastructure (AMI)
 - Reduced operating costs
 - Improved customer service
- ❖ Demand Response
 - Ability to predict demand and plan for/ take corrective measures
- ❖ Outage Management
 - Faster recovery after an outage
- ❖ Distribution Automation
 - Improved monitoring and control to avert outages
- ❖ Automatic Load Shedding
 - Intelligently reducing power to less critical portions of the distribution grid for emergency situations
- ❖ Alternative Energy Source Management
 - Integrates management of alternative energy sources such as wind and solar

About Tropos

Tropos is the market leader in wireless IP broadband mesh networks used by cities to create greener, safer, smarter communities. Our solution provides a single, secure, resilient, standards-based network infrastructure upon which to run hundreds of municipal services and applications that increase efficiencies while reducing costs. The network is controlled by a single, carrier-class management system and can scale to cover from tens to hundreds of square miles. Tropos has more than 38,000 routers installed today at 500 customer locations in over 30 countries, and holds 14 patents with an additional 50 pending.



Examples of cities Using a Tropos Infrastructure for Smart Grid and Other Municipal Services

❖ Anderson Municipal Power and Light (Anderson, IN)

- Net savings of \$18.7M expected over 15-years for centralized water and electric meter reading
- Cost effective wireless broadband infrastructure - 1 Tropos router/ square mile
- Faster awareness and pin pointing of outage reducing response time
- Leverages city’s existing fiber optic network for backhaul

❖ **Rock Hill Utilities (Rock Hill, South Carolina)**

- Wireless broadband network used for centralized water and electric meter reading; payback period: 7-8 years
- Fast network installation – 15 square miles operational in one week
- Increased utility billing accuracy, improving customer satisfaction
- Wireless broadband network securely used by other municipal departments including: police, fire



Why should I consider a wireless mesh when I already do drive-by meter reading today?

Drive-by networks mean that a meter is read each time a field worker drives by a location and the meter read is recorded onto a local device in the vehicle. While this method is faster than manual meter reading, it does not provide a continuous network connection to each meter eliminating the ability to use many of the Smart Grid applications such as Remote Service Connect/Disconnect, Demand-Response and Load Shedding. The Smart Grid requires two-way communications in real-time for all customers' meters.

What is the Return on Investment (ROI) of this type of network?

The ROI on a Tropos mesh is dependant on the overall network architecture chosen and the value created by the applications running over the network. For a single application, the breakeven can be in the 5-7 year range, but the ROI can be 1-3 years by adding multiple applications over time.

What additional benefits can a Tropos wireless broadband mesh network provide?

- Single standards-based IP-based wireless broadband infrastructure securely leveraged for use by all city departments reducing capital and operational costs
- Scalable as a community evolves and needs change, nodes are easily added to expand coverage area and capacity
- Multi-layered security and support for some of the strongest security standards including IEEE 802.11i and FIPS 140-2 in addition to user authentication, access control, encryption and data confidentiality and physical security
- A single central carrier-class management and monitoring system
- Enables delivery of improved services and new applications increasing quality of municipal services provided to the community
- Proven ROI, proven solution for modernizing the communication infrastructure of cities across America

CONTACT US TODAY TO FIND OUT ABOUT BUILDING A SMART GRID AND CREATING A GREENER, SAFER, SMARTER COMMUNITY



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