

Taking Control of the Future Electric Grid Today

Powered by MultiTech

The energy landscape is undergoing a fundamental shift. Our current electric grid infrastructure was designed more than 100 years ago to support predictable, unidirectional power flows from large centralized generation to millions of geographically dispersed customers. However, this century old design must now accommodate bi-directional power flows from distributed and variable renewable generation resources and increased variances in supply and demand – phenomena that were simply not anticipated when the grid was originally developed. Combining the increase of extreme weather events, more regulatory focus on energy efficiency, higher cost of peak demand capacity, and mounting customer demand for better quality, cleaner, and more affordable power creates unprecedented challenges to maintaining a robust, reliable power delivery system.

Traditional business-as-usual grid reinforcement techniques (reconductoring or replacing transformers) are simply not cost-effective nor do they give electric utilities the awareness, intelligence and agility needed to respond to dynamic system changes. Traditional primary side control solutions are not always effective, lacking the responsiveness and ability to target specific feeder locations without impacting a large branch or the entire feeder itself. It is clear that different solutions are necessary to meet electric utility needs for the next 100 years.



Problem

The need for robust, reliable communications within a small footprint to deliver operational intelligence



Solution

MultiConnect® rCell 100 Series and QuickCarrier® USB-E

Benefits

- Meets criteria for electric utility applications
- Large product portfolio
- Easy to integrate and use
- Robust, secure communications

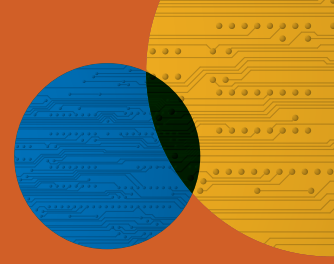
Through the family of power regulation products, Gridco Systems sets the foundation for greater visibility and control of power out to the low voltage (LV) edge of the grid. The company's mission is to help distribution utilities solve problems close to end customer facilitating systemic benefits that include meeting aggressive renewable portfolio standards, increasing energy efficiency, reducing peak demand and improving overall power quality.

The Gridco Systems emPower™ solution includes end-to-end hardware based on modular power electronics and advanced software for dynamic control and enhanced visibility throughout the grid. To ensure continuous visibility, utility providers need reliable communications to deliver effective operational intelligence. Because of this, Gridco Systems set out to qualify communication options through a combination of key criteria including size, operational temperature, usability and overall cost effectiveness. The optimal combination of these criteria became the overall determining factor in Gridco's desire to utilize the MultiTech MultiConnect rCell 100 series and the QuickCarrier USB-E.

MultiTech has a large product portfolio to choose from, along with the company's long standing reputation to provide, rugged and reliable hardware. MultiTech's QuickCarrier USB-E came as a certified end-device purpose-built electric utility applications. Because of MultiTech's extensive hardware options, the relationship grew even deeper when Gridco selected its rCell product for communication with Gridco's In-line Power Regulator™ (IPR) and the Static VAR Compensator™ (SVC) devices.

"MultiTech's embedded radio provided us the ability to offer multiple radios in one device, giving utilities the operational flexibility of leveraging different communication networks. Using Telit as MultiTech's main choice of cellular modems also greatly benefits Gridco Systems in offering robust, secure communications solutions for its customers," according to Vince Martinelli, Vice President of Product Management.

Going forward, Gridco Systems is eager to forge strategic relationships with suppliers, like MultiTech, that provide great value and benefits for its customers. Being able to meet stringent, utility-grade standards for quality, reliability and safety is the top priority.



***"Utilizing the
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***Vince Martinelli,
Vice President of Product
Management, Gridco***



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