

Telecom Italia chooses the ElectraGen™ 5 for reliable backup power at remote fixed network exchange site.

Background

Telecom Italia is the leading provider of fixed line, mobile and broadband communications in Italy. In total, Telecom Italia operates more than 20,000 wire-line and wireless network exchange sites. As part of its ongoing commitment to the environment, the company is researching the use of alternative energy for its backup power requirements, focusing on low emission hydrogen fuel cell technology.

Challenge

Telecom Italia needed a new backup power solution for a remote fixed network exchange site in Delia, Sicily. As part of its commitment to environmental sustainability, the company wanted to avoid the use of diesel generators or battery-based systems. Telecom Italia also needed to ensure that any new solution would integrate seamlessly with the existing metropolitan monitoring systems.

Solution

Telecom Italia chose the IdaTech ElectraGen™ 5 fuel cell system to supply backup power for its remote exchange in Delia. This fuel cell system delivers a reliable source of autonomous backup power for extended periods of time for a 3.5 kW load at 48 Vdc. The hydrogen fueled system is installed with five industrial bottles of hydrogen to provide more than 12 hours of reliable backup power with low emissions.

Results

Telecom Italia field-tested the ElectraGen™ 5 System extensively during the winter of 2006 to 2007 in an outdoor installation to validate system response to power interruption, load variation and overload conditions, as well as operation time with and without external batteries. The company also validated the system's ability to integrate with existing metropolitan monitoring systems.



Overview

Site: Delia, Sicily

Application: Standby backup power for a remote fixed network exchange site

Product: ElectraGen™ 5 System

Configuration: 48 Vdc

Fuel: Commercial-grade hydrogen

Customer Motivations: Reliability, autonomous operation, minimal environmental impact