

Case Study

Telefónica qualifies ElectraGen™ XTR Skid System as a reliable, extended run backup power solution for remote cell towers.

Background

Telefónica is a global telecommunications giant with more than 145 million customers worldwide. Its Telefónica Móviles unit is the leading wireless telecom service provider in Spain. Making certain that its cell towers operate reliably with no break in service is a critical concern. The company also wants to ensure that any new backup power solution it installs will have minimal environmental impact.

Challenge

A remote cell tower operated by Telefónica Móviles north of Madrid in central Spain suffered repeated power outages. An aging power recovery system consisting of a large bank of batteries proved difficult and costly to maintain. Telefónica Móviles needed to find a reliable, autonomous, low-emission solution for its remote backup power solution.

Solution

Telefónica Móviles decided to test the capabilities of the IdaTech ElectraGen™ XTR Skid fuel cell system as a source of reliable backup power for its remote cell tower in central Spain. The system was installed and Telefónica conducted an extensive onsite system performance evaluation for its ElectraGen™ XTR Skid System installation, from winter 2006 to fall 2007.

Global Energy Services installed the ElectraGen™ XTR Skid System with its standard 210 liter fuel tank that holds HydroPlus liquid fuel. HydroPlus (methanol/water liquid fuel) is reformed to generate hydrogen on demand, thereby eliminating the need for onsite storage of hydrogen bottles. HydroPlus liquid fuel can be safely stored for extended periods of time without freezing in cold weather conditions.

Results

The ElectraGen™ XTR Skid fuel cell system supported Telefónica Móviles' 2 kW load at the remote cell tower site reliably for over four days (more than 100 hours of operation) without the need for refueling.



Overview

Site: Central Spain

Application: Standby backup power for a remote mobile base transmission station

Product: ElectraGen™ XTR Skid System

Configuration: 48 Vdc

Fuel: HydroPlus (210 liter tank)

Customer Motivations: Reliability, autonomous operation, minimal maintenance requirements, low environmental impact