

Case Study

Interexport Telecommunication Deploys First Backup Power Fuel Cell System At Cell Site in Mobilink's Network

Background

Established in 2001, Mobilink provides professional radio service in several markets – logistics, transportation, telecommunications, government and public services.

In addition to its main radio service, Mobilink also offers value added services to its customers such as mobile telephony, messaging and GPS positioning to provide a complete communications solution.

Challenge

Secure communications for government, first responders and corporate fleets require uninterrupted communications at all times and under any disaster condition to ensure order and service to the community in need of help.

Although the electrical grid in Chile is fairly stable, telluric movement, seismic activity and planned power outages make the presence of backup power necessary for critical telecom sites.

Generators are a traditional backup power solution at telecom sites. Known disadvantages of diesel generators include high maintenance, unreliability, loud operation, high levels of pollution and fuel theft. Interexport needed to find an alternative backup power solution for Mobilink's critical telecom sites.

Solution

Backup power fuel cells offer improved system reliability, more predictable performance in a broad range of climates and a reliable service life when compared to battery banks and diesel generators.

Interexport Telecommunication took the initiative to install a leading edge technology fuel cell system that provides reliable and clean backup power in Mobilink's network.

IdaTech's ElectraGen™ ME fuel cell system was chosen because of its autonomous operation, quiet operation, small footprint and light weight. Fuel cell systems are usually fueled direct by hydrogen, but this particular system includes a fuel reformer that converts methanol and water liquid fuel into hydrogen gas to power the unit. The integrated 225-liter fuel tank of methanol-water fuel and fuel reformer produces 40 hours of 5 kW output power vs. 24 T-cylinders of hydrogen to produce the same amount of output power.

By generating its own hydrogen, the need for delivery and storage of bottled hydrogen is eliminated.

Result

Government communications and first responder communications are critical, and the remote access and alarm capabilities of the system allow the necessary "system health" awareness to ensure operation when the power goes out

Noise and low emissions make the system appropriate for urban environments and the system may be installed on shared sites with other Interexport customers.



Overview

Site: Lo Arcaya, Santiago de Chile

Application: Backup power for critical telecom site

Product: ElectraGen™ ME System

Configuration: 48 Vdc

Fuel: HydroPlus (225 liter tank)

Customer Motivations: autonomous operation, quiet operation, small footprint, and leading edge technology