

Case Study

Telecom Carrier in Trinidad Deploys Over 50 Reformer-Based Fuel Cell Systems on its Network

Background

A telecommunications company, operating in the beautiful Caribbean islands of Trinidad and Tobago, has a number of reasons to invest in reliable backup power systems to ensure their customers have no disruption in wireless and wireline services.

Challenge

Being a responsible corporate entity, the telecom carrier in Trinidad is interested in environmentally friendly, low maintenance and low frequency of maintenance backup power solutions, in addition to long backup time, in excess of 40 hours with one fuel filling. Footprint is also a very big concern, because most sites have very little equipment space left. Some sites are small, others are exposed to traffic, and therefore system footprint, noise, emissions and fuel logistics were key deciding factors in choosing a backup power system. In summary, the telecom carrier needed to find a reliable, safe, clean, compact, low maintenance, and extended run backup power solution with easy refueling capability.

In addition to backing up their wireless infrastructure, they were also looking for a backup power solution for their expanding DLC (Digital Loop Carrier) infrastructure, which delivers phone, TV, broadband and security services to their customers. These expanding services have positioned themselves as the telecommunications leader in their market.

Solution

In September 2009, after comparing leading competitive solutions, Trinidad's telecom carrier chose IdaTech's ElectraGen™ XTi fuel cell system for their commercial deployment, from Precision Power & Air (Caribbean) Ltd ("PP&A"), IdaTech's Caribbean partner. In addition to providing the systems, PP&A delivers an end-to-end solution that includes installation, maintenance, re-fueling and remote monitoring of the fuel cell systems.

The deployment of IdaTech's ElectraGen™ XTi fuel cell systems on the network has improved network availability and has been a valuable addition to its network.

Competitive alternatives, such as direct hydrogen fuel cell systems, require bottled hydrogen and specialized labor to handle the fuel. In contrast, the ElectraGen™ XTi operates on HydroPlus, methanol and water liquid fuel, which is easy to handle and is biodegradable.

The ElectraGen™ XTi fuel cell system includes a fuel reformer that converts methanol and water liquid fuel into hydrogen gas to power the unit. By generating its own hydrogen, the need for delivery and storage of bottled hydrogen is eliminated. This fuel cell system provides extended run backup power for days, not just hours. Its fuel tank holds 59 gallons which produces 50 hours of 5 kW output power. Refueling HydroPlus is an easy task and even simpler when using IdaTech's fuel transfer unit (FTU) which offers a safe and reliable refueling solution for systems deployed in the field.



Overview

Site: Trinidad

Application: Backup power for a mobile base transceiver station (BTS)

Product: ElectraGen™ XTi System

Configuration: 5kW, 48 Vdc

Fuel: Methanol-water liquid fuel

Customer Motivations: Reliable, Low Maintenance, and Easy Refueling

Result

At the time of this release, Precision Power has deployed 59 IdaTech fuel cell systems on the telecom network in the islands of Trinidad and Tobago. This sizeable installation confirms fuel cells attractive value proposition and demonstrates the growing trend to support eco friendly solutions.

When loss of electric power occurs, these systems quickly start providing power without loss of any telecom service. Precision Power continues to provide maintenance, refueling, and fuel cell remote monitoring services, enhancing its value as a full service provider on the islands of Trinidad and Tobago.