

# Smart Communications deploys fuel cell technology as backup power at cell sites

## Background

Smart Communications, Inc. (SMART) is the Philippines' leading wireless services provider, with 36.9 million subscribers. SMART operates a nationwide cellular network, a fixed wireless broadband service and a satellite phone service. It has the most extensive and modern digital communications GSM network and infrastructure in the country, covering over 99 percent of the population. Making certain that its cell towers operate reliably with no break in service is a critical concern. The company also wants to use alternative power sources like fuel cells, which will allow SMART to conduct its business with minimal impact on the environment.

## Challenge

Cellular sites contain critical telecommunication equipment requiring backup power with more than 4 to 6 hours of autonomy. The classic backup power supply consists of a battery bank and a diesel powered generator, both of which are not reliable and are costly to maintain. SMART needed to find a reliable, autonomous, and environmentally friendly solution for its backup power.

## Solution

SMART tested the capabilities of the IdaTech ElectraGen™ XTi Fuel Cell System as a source of reliable backup power for its cell site close to Manila. The system was installed in place of a diesel generator outside of the shelter on a concrete pad. Operating on HydroPlus, methanol and water liquid fuel, the ElectraGen™ XTi System generates its own hydrogen onsite and on demand, eliminating the need for delivery and storage of hydrogen bottles.

## Results

The ElectraGen™ XTi Fuel Cell System supported SMART at the cell tower site reliably for over four days. The system ran without interruption for 86 hours, with no faults, and passed the Smartcom Test.

Smartcom will deploy backup power fuel cell technology as part of its "Alternative Power for Cell Sites" program throughout Manila.



## Overview

**Site:** Metro Manila

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

**Product:** ElectraGen™ XTi System

**Configuration:** 48 Vdc

**Fuel:** HydroPlus (220 liter tank)

### Customer Motivations:

Fuel cell solutions are reliable, low maintenance, and environmentally-friendly.