

Case Study

Vodacom Deploys Fuel Cell System as Backup Power at Cell Site in South Africa

Background

Vodacom is a leading African communications group that provides mobile communications and related services to 43.5 million customers. Their network covers a population of approximately 182 million people across five countries: South Africa, DRC, Tanzania, Lesotho and Mozambique. Vodacom has additional presence in Africa via its subsidiary Gateway Communications, which has customers in 40 countries, providing communications services to multi-national companies and telecommunications network operators.

Vodacom Group is majority owned by Vodafone, one of the world's largest mobile communications companies.

Challenge

Vodacom's objective to provide quality communication services requires a strong reliable network. Their base station in Baviaanspoort, a remote location on the outskirts of Pretoria, where grid power is unreliable needed a reliable backup power solution that would also reduce maintenance costs. As part of their commitment to minimize their impact on the environment, Vodacom required a solution that would reduce energy consumption and lower emissions.

Solution

As part of Vodacom's drive to use safer fuel options (methanol/water), increase reliability, decrease operational costs, and reduce emissions, Vodacom installed the IdaTech ElectraGen™ ME 5kW system at their Baviaanspoort base station. IdaTech's ElectraGen™ ME 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. The ME system's high efficiency and minimal maintenance contribute to a significant cost reduction compared to standard generators.

Result

Vodacom's Baviaanspoort site has yielded significant savings in terms of maintenance and repair costs and improved reliability over the duration that the ElectraGen™ ME has been installed.

This site has also made real contributions towards Vodacom's reduced emissions initiative, energy consumption reduction and commitment to use alternative forms of energy.

In 2010, Vodacom SA deployed 89 fuel cell systems at base stations in South Africa. This confirms the value proposition of fuel cells and demonstrates the growing trend of telecom service providers to support and promote more eco-friendly initiatives.



Overview

Site: South Africa

Application: Backup power for a mobile base transmission station

Product: ElectraGen™ ME System

Configuration: 5kW, 48 Vdc

Fuel: Methanol-water liquid fuel

Customer Motivations: Fuel cell solutions are reliable, virtually maintenance-free, a renewable energy supply and environmentally friendly.