

## Case Study

# Singapore's Urban Redevelopment Authority (URA) Deploys Green Fuel Cells at its Corporate Headquarters

### Background

The Urban Redevelopment Authority (URA) is Singapore's national land use planning authority. URA prepares long term strategic plans, as well as detailed local area plans, for physical development, and then coordinates and guides efforts to bring these plans to reality. URA's mission is to make Singapore a great city to live, work and play in. It carries out its mission by planning and facilitating the physical development of Singapore, in partnership with the community, to create a vibrant, sustainable and cosmopolitan city of distinction.

The URA Centre which houses URA's employees underwent a major green retrofit in 2009/2010 to improve its environmental performance, energy and operational efficiency and indoor environment quality. Among the array of adopted eco-friendly technologies is the deployment of fuel cells for uninterrupted backup power for the building's critical systems.

### Challenge

The consultant for the project upgrade, Lincolne Scott Ng, was tasked by URA to incorporate green sustainable technologies that are innovative and cost-effective to help the building win the Singapore Green Mark award. Low life-cycle cost was an important criterion in the selection of appropriate green technologies.

### Solution

Fuel cells were selected to provide backup power for the building management system and lighting system for the data centre in lieu of traditional battery-backed UPS. Fuel cells provide a greener choice because they do not need to be housed in an air-conditioned environment unlike UPS. High cost of battery replacement every three years in UPS systems is also eliminated. Fuel cells also provide more cost-effective longer power backup duration compared with UPS systems. IdaTech's fuel cells were chosen because of their reliability and the close proximity of its service support centre in Kuala Lumpur, Malaysia.

### Results

The ElectraGen™ Systems provide backup power to the data centre during power failures.



### Overview

**Site:** Central Business District, Singapore

**Application:** Standby backup power for computers and servers for building management system and lighting in the data centre.

**Product:** ElectraGen™ System

**Configuration:** 2 x 15 kW systems, 48 Vdc

**Fuel:** Hydrogen

**Customer Motivations:** Environmentally friendly, low-operating cost, and high reliability