



Government
of Canada
Trade Commissioner
Service

Gouvernement
du Canada
Service des
délégés commerciaux

Canada

CANADA A GLOBAL LEADER IN HYDROGEN AND FUEL CELL STATIONARY AND BACK-UP POWER

Canada is a pioneer and global leader in the development of fuel cell stationary and back-up power generators for data centers, hospitals and telecom transmission towers with poor grid reliability or susceptibility to severe weather conditions. Offering reduced emissions and noise, fast start-up, extended run times, and lower operating costs, telecom network operators in North America, Indonesia, India, China, South Africa, Mexico and the Bahamas are reaping the benefits of Canadian fuel cell technology.



Hydrogenics designed and manufactured a 100KW system for the Honolulu's Maritime Hydrogen Fuel Cell project to test a hydrogen-fuel-cell-powered generator as an alternative to conventional diesel generators. This technology will enable major commercial ports and marine vessels to lessen their environmental impacts. Hydrogenics Power Systems are operating in remote locales and commercial/industrial facilities around the globe.

HYDROGENICS CORPORATION > www.hydrogenics.com

Hydrogenics is helping forward looking organizations around the world move beyond burning oil, gas and diesel for the advantages of advanced hydrogen technologies for remote and intermittent power needs with:

- > Zero emissions at point of generation
- > The ability to operate when other renewable sources are not available (i.e. wind and solar)
- > Smart grid connections offering improved economies for off-grid applications
- > Backup and uninterruptible power systems.

Bringing leadership and innovative solutions to the world.

HYDROGEN AND
FUEL CELLS

TRADE COMMISSIONER SERVICE (TCS)

EXAMPLES OF INNOVATIVE COMPANIES INCLUDE:



BALLARD POWER SYSTEMS > www.ballard.com

Ballard Power Systems, Inc. is recognized as a world leader in the design, development, manufacture and sale of clean energy fuel cell systems. Ballard offers complete power solutions to critical infrastructure operators like telecom, optical fibre and emergency communication networks in order to improve site availability reduce revenue losses and improve customer satisfaction.

Ballard's FCgen®- H2PM fuel cell backup power system has been successfully installed and operated at approximately 120 radio base station sites throughout the Denmark SINE emergency services network. These systems have been in operation for over 5-years and have zero start failures through an estimated 4,000 power outages, providing a critical backup power solution with extended run time to ensure continuous service during any emergency situation.



NORAM ENGINEERING AND CONSTRUCTORS > www.noram-eng.com

NORAM is a private multi-disciplined technology company experienced in the design and operation of electrochemical plants with loads between 5 and 200 MW, and specializes in the development, commercialization and supply of electrochemical processes. Expertise includes chemical process engineering, plant modeling, design of chemical and electrical systems, systems integration, supply of prototype and pilot plant systems, and supply of specialized balance-of-plant components including hydrogen generation and delivery systems.

NORAM expertise includes stationary power applications for fuel cells, with an emphasis on regenerative fuel cells (flow batteries) for industrial and utility-scale energy storage. NORAM is also active in reforming technologies for hydrogen production. NORAM supplies proprietary engineering and equipment packages worldwide through its Vancouver office and local fabrication subsidiary.

> Canadian hydrogen and fuel cells are providing emissions-free back-up power around the globe

MORE FIRMS WITH STATIONARY AND BACK-UP POWER EXPERTISE:

- > **Hydrogen In Motion Inc. (H2M)**
www.hydrogeninmotion.com
- > **Palcan Energy Corp**
www.palcan.com
- > **Next Hydrogen**
www.nexthydrogen.com
- > **Sacré-Davey Engineering**
www.sacre-davey.com



THE CANADIAN HYDROGEN AND FUEL CELL ASSOCIATION

For more information about innovative Canadian hydrogen and fuel cells companies please visit > www.chfca.ca

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