

# CONTRACTS FOR HYDROGEN BUS FLEET FINALIZED

## Backgrounder



**August 3, 2007** -- BC Transit has awarded a \$46.4 million contract for manufacture of the world's first fleet of hydrogen fuel cell buses, with delivery by the end of 2009

## Fuel Cell Bus Fleet

BC Transit will deploy the world's first fleet of 20 fuel cell buses and hydrogen infrastructure to be integrated into the regular operational service of an urban transit system. This fleet operation will allow monitoring and evaluation of operations, maintenance and fuelling over a sustained period.

### Implementation Calendar:

2008	pre-production bus arrives in Victoria
2009	production buses arrive and the fuel cell bus fleet starts regular service in Whistler
2010	fleet used to showcase Canadian technology at the 2010 Winter Games in Whistler
2010+	fleet continues regular operations with a 20-year life span for each bus

### Suppliers:

Bus manufacturer	New Flyer Industries, Winnipeg, Manitoba
Hybrid Drive Systems	ISE Corporation, San Diego, California
Fuel Cell Modules	Ballard Power Systems, Burnaby, BC
Buses	New Flyer low floor 41'
Fuel Cells	Ballard "HD6" 130 kW heavy duty fuel cell module
Hydrogen storage	Dynetek "DyneCell" Type 3 tanks; 5000 psi (350 bar) hydrogen gas
Hybrid Drive	ISE "ThunderVolt" hybrid electric drive system with Siemens drive motors and other driveline components
Energy Storage	Cobasys nickel metal hydride batteries

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## BC Transit

BC Transit is the provincial crown agency that provides planning, marketing, fleet and funding support for all transit systems in British Columbia, outside the Greater Vancouver region. BC Transit carried a total of 42.5 million passengers in 2006/07, an increase of over 4% over the previous year. The program includes 77 transit systems across British Columbia outside Greater Vancouver.

The deployment of the fuel cell bus fleet meets BC Transit's objective to identify and adopt new technologies to enhance customer service, improve air quality and reinforce transit's community benefits.

**QUOTE:** "With a growing public awareness of climate change and sensitivity to the environmental impacts of the transportation system, BC Transit is introducing many new fuel and technology initiatives," said Kevin Mahoney, chair of BC Transit. "The fuel cell buses will provide the cleanest and most efficient propulsion technology in the long term. BC Transit is a proud partner and supporter of the Province's vision for the deployment of 20 fuel cell buses by 2010. This will help BC Transit improve British Columbia's quality of life by reducing greenhouse gas emissions and improve the rider's overall experience."

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## New Flyer

New Flyer is the leading manufacturer of heavy-duty transit buses in the United States and Canada. The Company's three facilities -- in Winnipeg, MB, St. Cloud, MN and Crookston, MN -- are all ISO 9001, ISO 14001 and OHSAS 18001 certified. With a skilled workforce of approximately 2,100 employees, New Flyer is a technology leader, offering the broadest product line in the industry, including drive systems powered by clean diesel, LNG, CNG and electric trolley as well as energy-efficient gasoline-electric and diesel-electric hybrid vehicles. In 2004, New Flyer was awarded CALSTART's prestigious *Blue Sky Award* for outstanding marketplace contributions to advanced, sustainable transportation and in 2005, New Flyer was awarded the CCME Pollution Prevention Award by the Canadian Council of Ministers of the Environment. All products are supported with an industry-leading, comprehensive parts and service network. New Flyer's Income Deposit Securities are traded on the Toronto Stock Exchange under the symbol NFI.UN.

**QUOTE:** "We are pleased to have been selected by BC Transit as the prime contractor for the fuel cell mass transit initiative. This project allows us to continue the work we began with Ballard over a decade ago while leveraging our demonstrated leadership in the manufacture of fuel-efficient, greener transit solutions," said John Marinucci, President and CEO of New Flyer. "As an accomplished integrator of innovative transportation technologies, New Flyer looks forward to working with the most advanced hydrogen fuel cell technology and electric drive and energy storage systems, provided by Ballard and ISE, respectively. These transit vehicles will be more durable and efficient with a greater range of operation when compared to previous generations. We believe these highly-innovative, zero-emission vehicles will play a critical role in the future of transit. We applaud BC Transit on its vision to commercially deploy this environmental initiative which preserves non-renewable energy sources, substantially reduces our environmental footprint, and improves our quality of life."

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## Ballard Power Systems

Ballard Power Systems is recognized as the world leader in the design, development and manufacture of zero-emission proton exchange membrane (PEM) fuel cells. Ballard offers a variety of fuel cell products to support customers' power requirements for transportation, materials handling, residential cogeneration and telecommunications backup power applications. Ballard's products include the renowned Mark902 for auto manufacturers; the Mark9 SSL™ for both motive and stationary power applications; the Mark1030 for integration into combined heat and power systems; the Mark1020 ACS for back-up power applications; and, the 1.2 kilowatt Nexa® power module for stationary or portable power generation applications.

**QUOTE:** "We can think of no better way to showcase globally-recognized, BC-developed and built technology than to operate what will be the world's largest fleet of fuel cell buses in our own backyard," said John Sheridan, Ballard's President and Chief Executive Officer. "The vision and leadership shown by the Province of British Columbia and BC Transit in championing fuel cell technology demonstrates this province's commitment to developing sustainable mass transit solutions, and illustrates the critical role that government plays in helping to commercialize new technologies. All of us at Ballard are very proud to supply the fuel cells that will be powering BC Transit's fuel cell bus fleet."

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## **ISE Corporation**

ISE Corporation, based in San Diego, is a leading supplier of hybrid drive systems and components for heavy-duty vehicles such as buses, trucks, trams, airport equipment, and military vehicles. ISE is a world leader in electric, hybrid-electric, and fuel cell technologies, and the U.S. distributor for Siemens ELFA™ electric and hybrid-electric drive components.

**QUOTE:** "ISE is honored to have been selected as a member of the New Flyer/ISE/Ballard team by BC Transit to provide 20 high efficiency, zero emission, hybrid fuel cell drive systems for what will soon be the largest fleet of hybrid fuel cell buses," said Dave Mazaika, President and CEO. We commend BC Transit on their leadership and commitment to improving the environment and reducing global warming through the adoption of advanced technology buses which produce zero greenhouse gases."

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