



International Partnership *for the* Hydrogen Economy



# Country Update CANADA



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# Hydrogen Infrastructure Demonstrations





# British Columbia Hydrogen Highway

## Examples of Activities:

- 7 Hydrogen Fueling Stations:
  - Vancouver, Surrey, North Vancouver, Port Coquitlam, Victoria, Vancouver Airport, Whistler
- Integrated Waste Hydrogen Utilization Project
  - Hydrogen and H2 CNG Fuelling Stations
  - 4 Hydrogen CNG buses
  - 8 Pick-up trucks (H2 ICE)
  - Fuel cell-powered car wash
- Activities at Vancouver International Airport include fueling station, hydrogen-powered airport baggage tugs, utility vehicles and shuttle buses.
- Photovoltaic panels, electrolyser and hydrogen storage at the NRC Institute for Fuel Cell Innovation
- Hydrogen Technology Environmental Chamber
- Integration with Vancouver Fuel Cell Vehicle Program





# Vancouver Fuel Cell Vehicle Program



- Partnership between Government and Industry
- Demonstration of sustainable, zero-emission based transportation technologies
- 5 Ford Focus vehicles to be evaluated for three years in Vancouver's Lower Mainland
- Technology: Ballard Fuel Cell Systems, Dynetek Hydrogen storage
- Opportunity to test, demonstrate, deploy and evaluate proprietary systems for H<sub>2</sub> production



# Deployment of hydrogen fuel cell buses

Canada will be home to the world's largest deployment of hydrogen fuel cell buses

- 20 **hybrid** fuel cell buses in regular transit service by 2009 in Whistler
- Sixth generation of fuel cell bus technology. Fifth generation was tested in Europe from 2002-2005 using Canadian technology.
- 62% reduction in GHG emissions compared to diesel buses
- Largest H<sub>2</sub> fuelling station in the world (1000 kg/day capacity)



Project features Canadian technology and expertise from:

Air Liquide Canada  
Ballard Power Systems  
Dynetek Industries  
Hydrogenics Corporation  
New Flyer  
Questair Technologies  
Sacre-Davey Engineering



# Hydrogen Highway's H<sub>2</sub>i Campaign

Campaign to promote the sector during 2010 Olympics



- The H<sub>2</sub>i campaign will increase awareness of hydrogen fuel cells as a viable energy solution and support the sustainability pillar of the 2010 Olympic Winter Games.
- Official 2010 Olympic partners including Government of Canada, Government of BC, General Motors, Vancouver International Airport, BC Hydro awarded VANOC Sustainability Star for their involvement in the BC Hydrogen Highway.
- During the Olympics, a series of demonstrations will include hydrogen fueling and deployments of hydrogen and fuel cell cars, trucks, transit buses, forklifts, airport tuggers, and stationary products.



# Hydrogen Highway's H<sub>2</sub>i Campaign



- H<sub>2</sub>i campaign working to place hydrogen and fuel cell technology in high-profile locations during Games time including BC Media Centre and “live” sites (BC, Canada Pavilions).
- Comprehensive communications plan includes media outreach, website ([www.poweringnow.ca](http://www.poweringnow.ca)), social media, video, advertising
- Business-to-business opportunities for local hydrogen and fuel cell companies and organizations with incoming international delegations



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Thank you