



# International Partnerships for the Hydrogen Economy (IPHE)



Demonstrations: The Canadian Hydrogen and Fuel Cell Story

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#### **Overview of Canadian Presentations**



- Canada's hydrogen and fuel cell program spans the innovation spectrum
- Today, we are showcasing the Canadian approach to demonstrating hydrogen and fuel cell technology:
  - Individual building blocks of the Hydrogen Economy that integrate infrastructure and various applications
  - Partnering among government, industry and academia
  - Participants include technology developers, end users, and the general public
  - Technology validation, codes and standards development, education and awareness
- Integrated demonstration initiatives:
  - Hydrogen Highway™
  - Hydrogen Village™
  - Vancouver Fuel Cell Vehicle Program
  - others
- Discuss role of demonstration in the innovation continuum and progress towards eventual technology commercialization
  - Ballard Power Systems and Angstrom Power Inc.



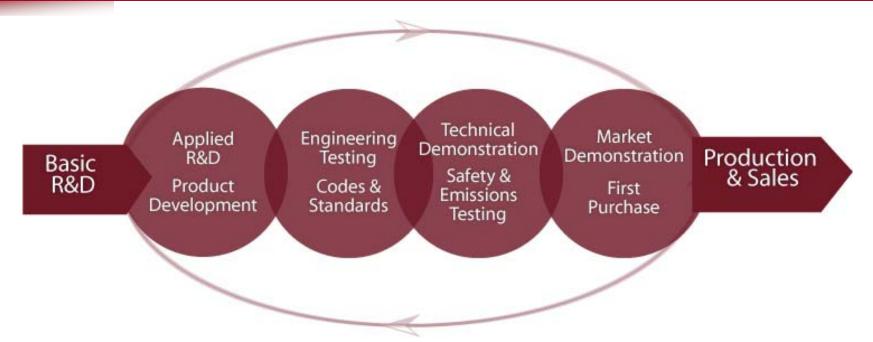
### **Canada's Approach to Demonstrations**

- An integrated approach:
  - The co-existence of hydrogen production, storage and delivery, applications for stationary, transportation (mobile) and portable applications in realistic conditions
  - Economic, environmental and social objectives
- Partnerships and collaboration:
  - Government, industry, academia
  - Federal, provincial, municipal
  - Regulating bodies, end users and the general public
- Funding mechanisms:
  - Program drivers
  - Sharing risk
  - A unique example: Canadian Transportation Fuel Cell Alliance





#### The Role of Demonstration



- Not just a "near end-point", demonstration is an important contributor to guide future R&D and product development, to trigger the creation of codes and standards and regulations.
- Feedback loop incorporates learning and validation, increasing the opportunity for successful technology commercialization.



## **Canada's Demonstration Objectives**



- Integration of hydrogen and hydrogen-compatible technologies
- Development and evaluation of hydrogen infrastructures
- Development of skills and supply chain
- Development of codes and standards
- Increase in performance, reliability, durability and economical viability of hydrogen and hydrogen-compatible technologies through technology validation
- Increase of public, consumer and investor awareness and acceptance of the hydrogen capability



# **Canada's Demonstration Activity**











