



International Partnership  
for Hydrogen and Fuel Cells  
in the Economy

## *Canada* Update

31<sup>st</sup> IPHE Steering Committee Meeting

10 – 11 April 2019

Vienna, Austria

# Announcements and/or New Initiatives

## Canada



### Investments/Funding

Building on ongoing investments R, D&D, through the Low Carbon Economy Fund (\$2B), and Strategic Innovation Fund (\$800M), announced in 2017 and 2018,

- Deploying Hydrogen stations – 4 under construction, 2 open to public and 15 planned by 2022
- Collaborating with the US DOE on hydrogen codes and standard development – launch of the Center for Hydrogen Safety
- Federal Budget 2019:
  - Over \$430M/ 5yrs for Zero Emission Vehicle recharging and refuelling infrastructure, consumer purchase incentives, and accelerated capital cost allowance for commercial purchase
- British Columbia included \$107M for Zero Emission Vehicle Purchase incentives (\$6000/ FCEV), and zero emission vehicle mandates

### Collaborations

- World's largest hydrogen electrolyzer facility (20MW) – partnership between Air Liquide and Hydrogenics

# Announcements and/or New Initiatives

## Canada



### New research & development, demonstration and or deployment activities

- Alberta Zero-Emissions Truck Electrification Collaboration (AZETEC) project - \$15M/ 3yrs to test hydrogen fuel in Alberta's freight sector, including the design and manufacturing of **two** heavy-duty, extended-range, **hydrogen fuel cell electric hybrid trucks**

### Enabling factors Other

- National Zero Emission Vehicle sales targets announced (10% by 2025, 30% by 2030, and 100% by 2040)
- Hydrogen Pathways Report being finalized (released in May)
- Clean Energy Ministerial, Hydrogen Initiative launch

# Examples of Lessons Learned and Impact

## Canada



Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
Investing in Infrastructure (\$182.5M/ 6 years)	<ul style="list-style-type: none"><li>• If you build it, they really do come (Toyota deploying 50 FCEV)</li></ul>
Alignment of Codes/ standards, and Regulations across jurisdictions	Feasible, but industry needs to be engaged, and involved Communication with relevant regulators is essential
Regulations for Hydrogen Metering for Retail Sales	Applying best practices for other alternative fuels (e.g. natural gas) is not always technically feasible for hydrogen.

# Applications - Current Status and Goals

## Canada



Application	Status (As of <i>Month, Year</i> )	Goal (For <i>Year</i> )
Fuel cell vehicles	<i>67 (with more coming)</i>	<i>NA</i>
Hydrogen stations	<i>3</i>	<i>15 (Federally supported)</i>
Fuel cell buses	<i>1</i>	<i>NA</i>
Electrolyzers	<i>20MW electrolyzer</i>	<i>NA</i>
Primary fuel cell power units	<i>1</i>	<i>NA</i>
Backup power fuel cell power units	<i>100s</i>	<i>NA</i>
<i>Power -to - gas</i>	<i>2 (200kw, and 5MW)</i>	<i>NA</i>

# Thank you



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