



Country Update: Canada

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Key Economic Driver:

Canada

INNOVATION AND SKILLS PLAN: Positioning Canada for the Future Economy

Priorities include:

1. **PEOPLE & SKILLS**

- Fostering a skilled, talent, creative, and diverse workforce

2. **RESEARCH, DEVELOPMENT & COMMERCIALIZATION**

- Develop and adopt discoveries and innovation through collaboration

3. **GROWING FIRMS**

- Stimulate investments and growth



Policy and Funding Updates: Federal

Canada

Pan-Canadian Framework on Clean Growth and Climate Change

- FPT governments completed series of consultations for national:
 - **Zero Emission Vehicle Strategy** to be announced in 2018
 - **Low Carbon Fuel Standards & Carbon Taxes** (\$10/t - \$50 x 2022)
- Innovative Supercluster Initiative (\$950M)
- Strategic Innovation Fund (\$1.26B)
- Low Carbon Economy Fund (\$2B)
- Additional \$400M in VC funding
- Hydrogen-powered rail (“Hydrail”)
- Infrastructure Canada increased funding for green infrastructure nationwide by nearly 350% to \$21.9B
 - Canada Infrastructure Bank (\$5B of a total of \$35B)
 - Public Transit (\$5B)
 - Arctic Energy Fund (\$400M)



Policy and Funding Updates

Canada

British Columbia

- New provincial government: **NDP** & **Green** parties
- The \$40M ZEV incentive program remains in place
- \$1.5M for 3 new HRS's in Greater Vancouver funding for 3 more stations under development
- Carbon taxes to increase to \$50/tonne by 2021 and no longer revenue-neutral



HRS and Mirai's FCEV in Burnaby, BC

Ontario

- 5% of all new passenger vehicles to be zero-emission by 2020
- Created an Electric and Hydrogen Vehicle Advancement Partnership and updated the Electric Vehicle Incentive Program
- “Hydrail” feasibility study – Greater Toronto region (Metrolinx)

Quebec

- Completed public consultations for Canada's first ZEV mandate;
- Pilot network of multi-fuel service stations in partnership with Toyota Canada



Direction of Developments

Canada

- Federal, provincial and municipal governments incenting the adoption of ZEVs and the deployment of ZEV infrastructure
- Infrastructure development through PPPs
- Regulations and associated carbon credits being used to incent and fund, HRSs
- Heavy duty FC electric applications: Hydrail, Buses, Ports
- Excess renewable energy capacity in multiple jurisdictions seen as a potential source of inexpensive, clean H₂ @ scale



Ontario Minister of Transportation announcing "hydrail" feasibility study



Excess Renewable Power

Canada

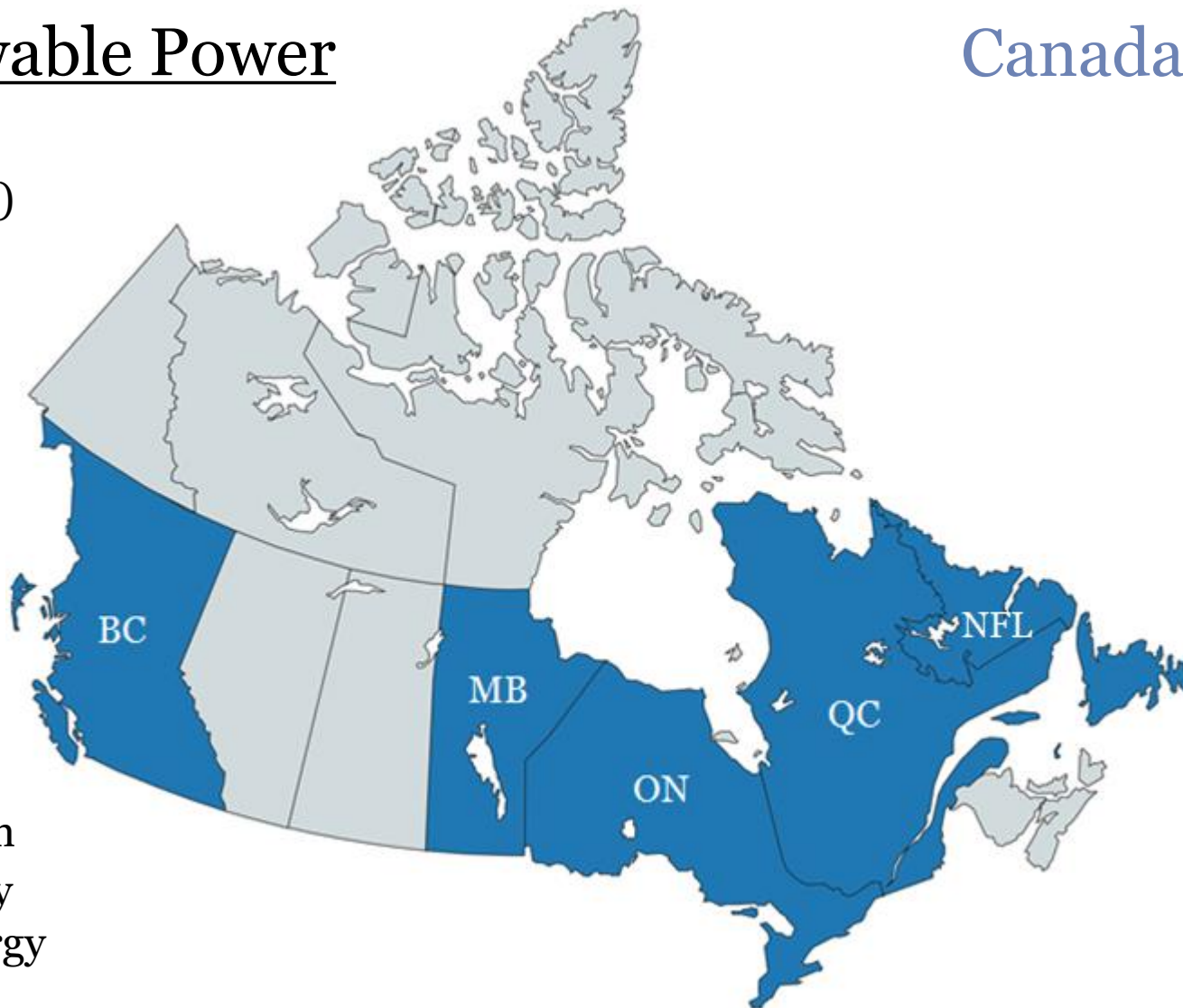
British Columbia (BC)

Manitoba (MB)

Ontario (ON)

Quebec (QC)

Newfoundland and
Labrador (NFL)



- >4.6M km²
- ~29.3M population
- >90K MW capacity for renewable energy



Potential Areas of Collaboration

Canada

- Access to HFC suppliers & public research facilities
- Collaborative RD&D projects (SDTC, NRC-IRAP, MITACS, BC government)
- Heavy-duty transportation (e.g. Hydrail, FCEBs, Trucks, etc.)
- ZEV infrastructure development
- Deployment of Asian, European & American made FCEVs
- Codes, Standards & Regulations (e.g. H₂ metering for retail sale)
- **GLOBE Forum 2018**: Vancouver – March 14-18, 2018
- Canadian delegations to be present at various international events:
 - **IHFC**: Pune, India – December 10-12, 2017
 - **FC Expo 2018**: Tokyo, Japan – February 28-March 2, 2018
 - **WHEC 2018**: Rio de Janeiro, Brazil – June 17-22, 2018

Current Deployments

- 20 FCEVs, 544 FC forklifts, 8 HRS's, and 1 FCEB



Canada

Thank you!

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