GROWING THE CANADIAN EV INDUSTRY
THE EMC PERSPECTIVE

June 2019
EMC is the only national organization dedicated exclusively to accelerating the electrification of all modes of transportation and represents the complete value chain of this growing industry.

VISION

Working together to move Canada’s transportation system to electric traction.

MISSION

To support the efforts of our members in driving the adoption of electric mobility technologies by Canadians as key means of achieving sustainability in transportation and to position Canada as a global leader in developing and implementing electric mobility in all modes of transport.
Global trends point to a push towards electrification and present major business opportunities that Canada can embrace.
ELECTRIFICATION INCLUDES VEHICLES

- Operated through batteries, grid connectors, and fuel cells.
21% growth in EV sales compared to Q1 2018

55% decrease in EV sales in Ontario compared to Q1 2018

100% increase in EV sales in British Columbia and 56% in Quebec compared to Q1 2018

EV market share in Canada during Q1 2019: 1.89%
PEV SALES IN CANADA

(SOURCE – GENERAL MOTORS)
EV SALES AS % OF TOTAL SALES
SOURCE – GENERAL MOTORS

**Ontario Plug-in Vehicle Sales & % of Industry**

*Source: IHS Markit Total Registrations thru Dec’18*

Ontario Government funded maximum retail incentives began at $7000 per vehicle and increased to $14000 per vehicle in Mar 2017, this level was maintained until Sept 2018 when it dropped to zero.
MODES OF TRANSPORT THAT CAN BE ELECTRIFIED

On Road
- Light duty vehicles
- Commercial Vehicles
- School Buses
- Transit Buses

Off Road
- Marine recreational
- Marine commercial
- Farming
- Mining
R & D DONE IN CANADA

- Batteries
- Fuel Cells
- Chargers
- Electric Motors
- Power Electronics
- Smart Grids
- Management and monitoring software
- Information services
EV RESEARCH IN CANADA

Involves

- 250 companies
- Many utilities
- 30 universities, colleges and research centres
CANADIAN EV DESIGN AND PRODUCTION
SUPPLY CHAIN COMPANIES ARE INVOLVED IN

- Large transit buses
- School buses
- Heavy duty mining vehicles
- Battery design and fuel cell design
- Onboard system integration
- Off-road vehicles, trains,
- Vehicle parts and components using advanced composites
- Advanced power conversion devices
- Communications software and controls
- Manufacturing processes
- Non-propulsion auto parts for EVs
CHALLENGES TO THE GROWTH OF EV INDUSTRY IN CANADA

- Cheaper production elsewhere (i.e. China)
- Limited research in Canada from traditional OEMs
- Limited size domestic market
- Buy America regulations

- Recognized leaders in the EV industry come from China, USA, Europe, UK, Japan and Korea

But we do have some advantages
CANADIAN COMPETITIVE ADVANTAGES

- Heavy duty and large EV powertrain systems and integration
- Prototyping and testing
- Software and controls
- Cold climate component and vehicle testing
- Light-weighting materials
- Manufacturing cost reduction processes
- Fuel Cell systems
TARGET MARKETS FOR CANADIAN COMPANIES

- European Union
- United States
- India
- China
- Korea
- Japan
- Brazil
- Mexico
- South East Asia
- Turkey
JOBS IN CANADA’S EV SECTOR
SOURCE – EMC GLOBAL STRATEGY REPORT - 2017

- 2017 survey indicated 20,000 jobs in Canada
- Data is now being updated.
- Jobs will grow as EV market share increases.
ENCOURAGING FACTORS

- EV sales growing rapidly in light duty vehicles
- Ebuses in transit applications becoming more popular
- Encouraging pilots in commercial vehicles, marine applications, mining and farming
FACTORS SUPPORTING INCREASE IN EV SALES

- Global trends supporting EVs
- Current federal incentives, regulations, policies and programs
- Coming Clean Fuel Regulations and initiatives for the electrification of commercial vehicles and buses.
- Provincial incentive programs (QC and BC)
- Provincial ZEV mandates (BC and QC)
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- For more information about Electric Mobility Canada, please visit www.emc-mec.ca