



March, 2014

The GHG Challenge



Ontario		Canada
7.6 Million	Light Duty Vehicles (cars)	21.8 Million
16 Billion	Litres of Gasoline/Year	40 Billion
36.8 Million	Tonnes of CO ₂ per Year	94 Million
31%	% of Total GHG Emissions	24%

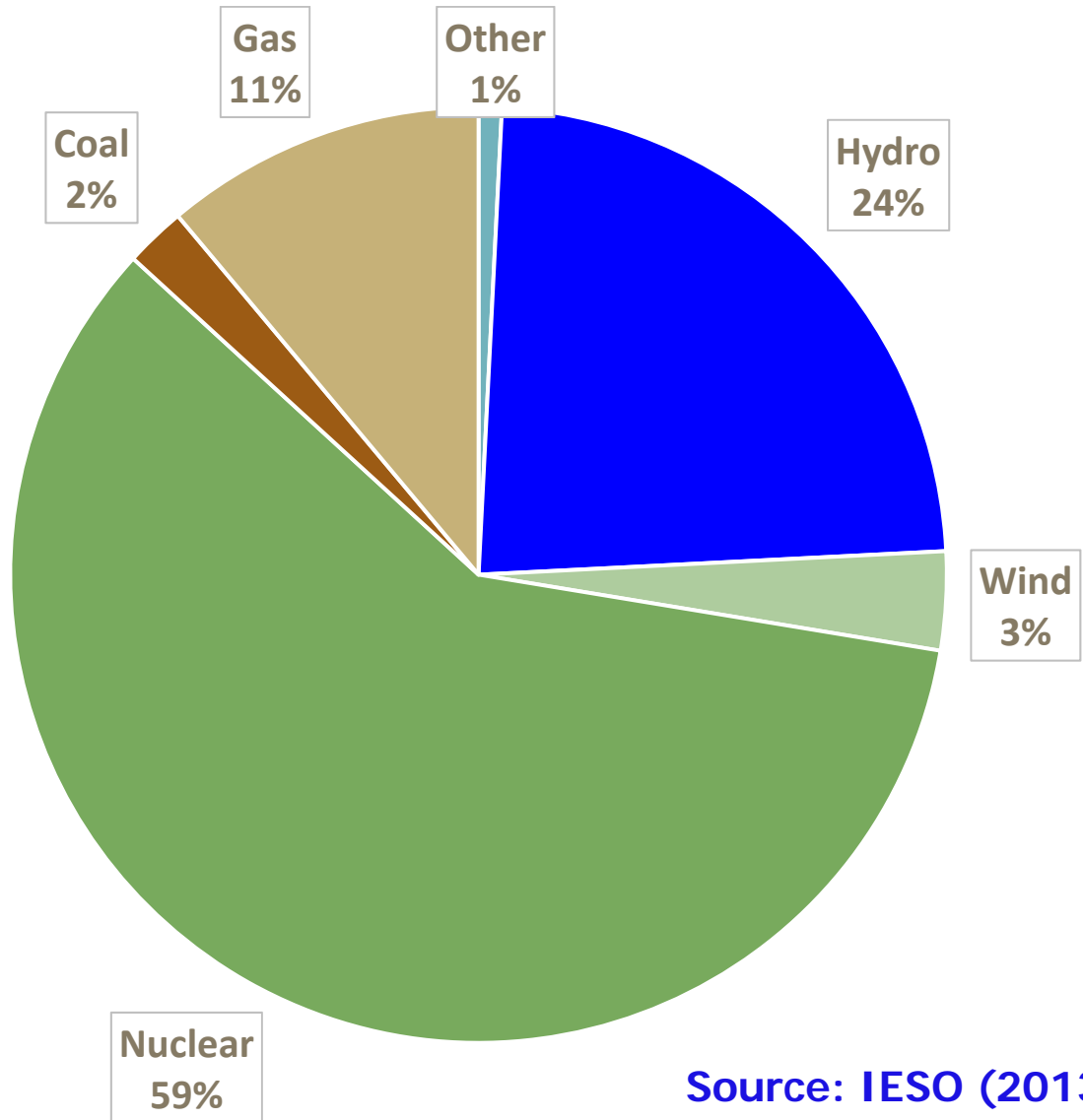


Source: Statcan

Ontario's Energy Mix



- **Locally made**
- **Low cost**
- **Low emitting**
- **Surplus at night!**



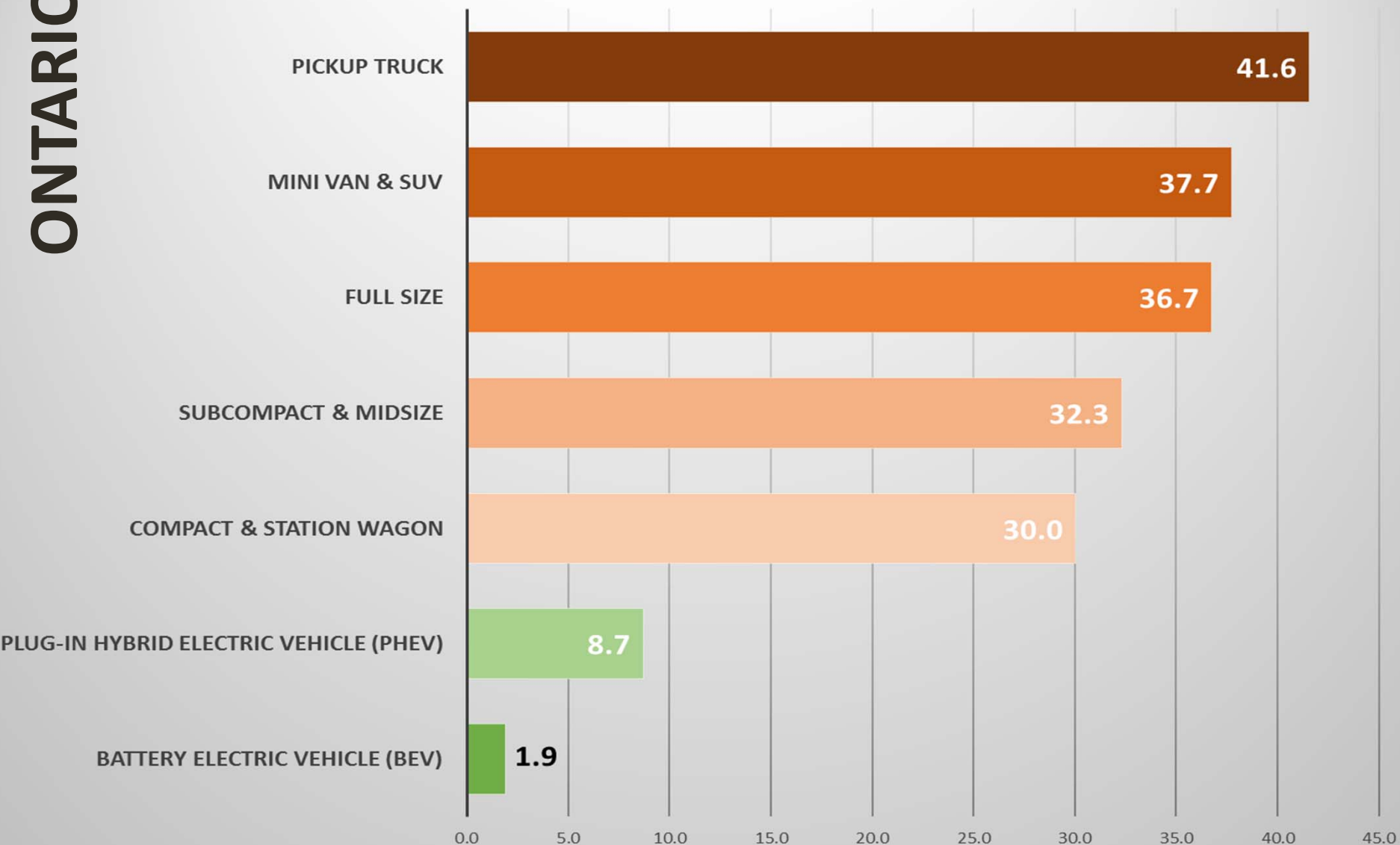
Source: IESO (2013)

Environmental Benefits



Average Emissions (kg/CO2) per 100km

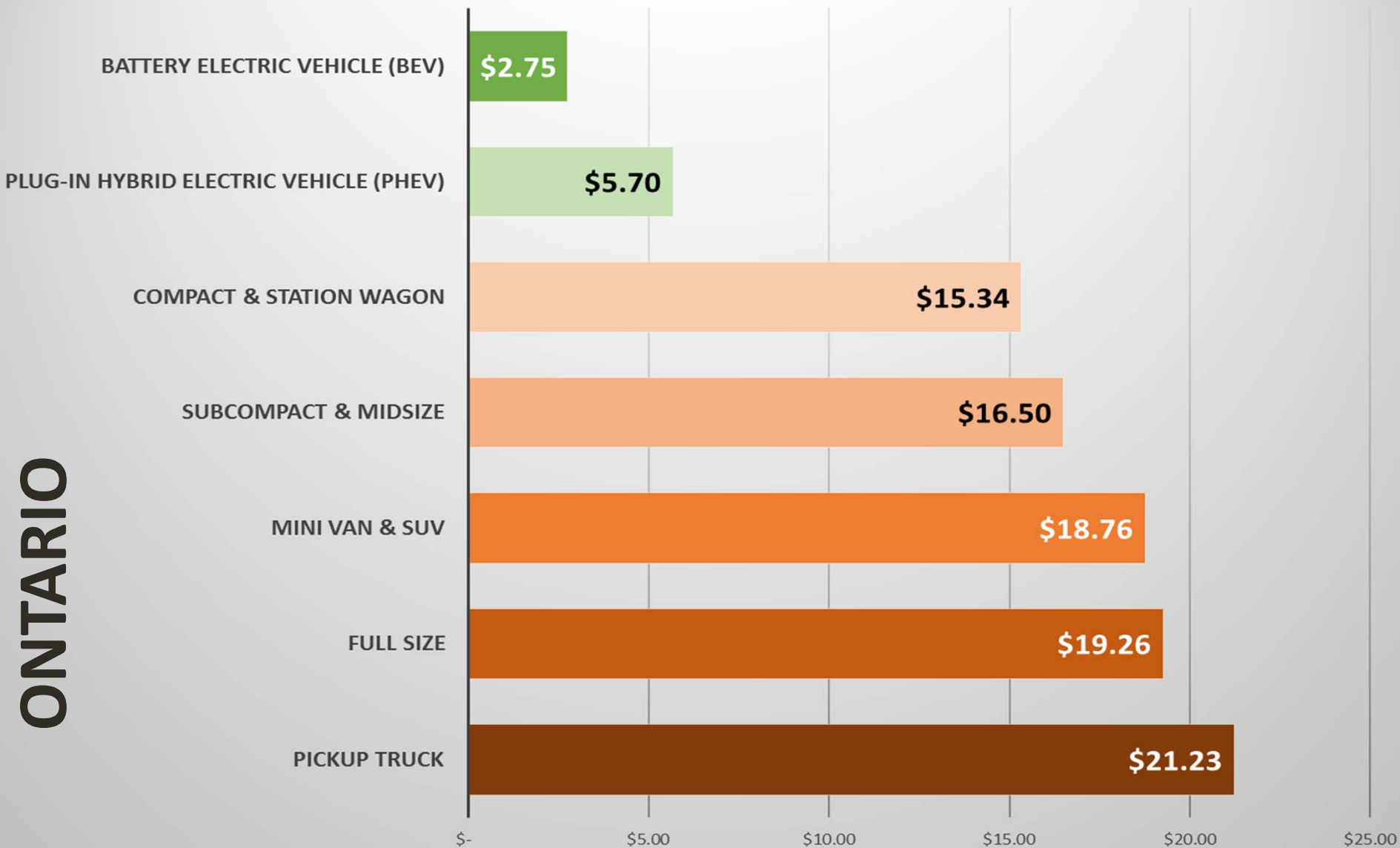
ONTARIO



Cost Savings



Average Cost to Drive 100km



ONTARIO

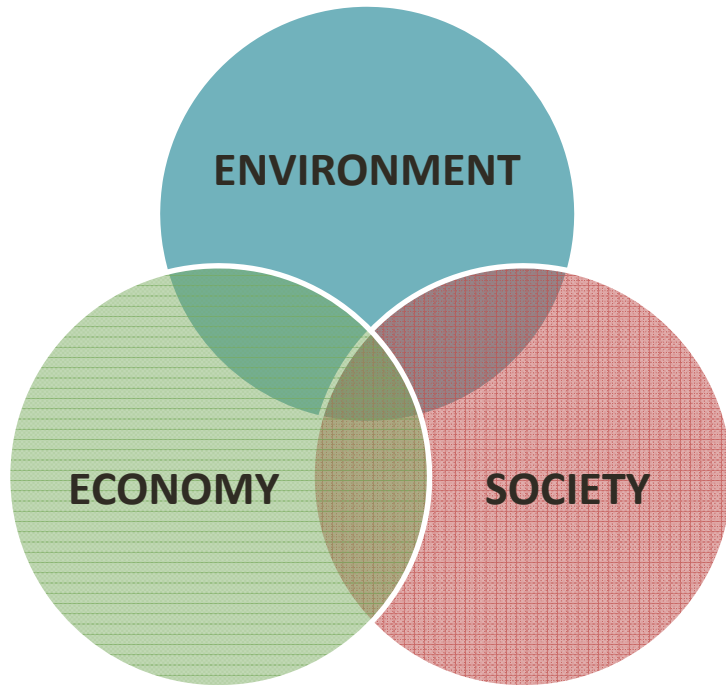
The Costs of Air Pollution



Ontario	Total Costs 2008-2031	Canada
\$9.2 Billion	Lost Productivity	\$17.6 Billion
\$6.5 Billion	Healthcare Costs	\$12.6 Billion
\$5.5 Billion	Quality of Life	\$10.3 Billion
\$96.5 Billion	Loss of Life	\$257.9 Billion

[\(Canadian Medical Association, 2008\)](#)

Sustainability Winner



- Emit up to **90% less CO₂** than a gas car
- 'Fuel' is **80% cheaper** than gas
- Electricity is **Made in Ontario**
- Charge batteries at night taking advantage of **surplus baseload** electricity

Plug'n Drive

Formed in 2008

Independent NonProfit Since June, 2011

Mission: Accelerate the adoption of electric cars to advance their economic and environmental benefits.

Board of Directors:

David Collie - CEO, Electrical Safety Authority

Dennis Edell - CEO, Rain 43

Len Griffiths - Partner, Bennett Jones LLP

Jim Keech - CEO, Kingston Utilities

Don MacKinnon - President, PWU

Adele Malo – CEO, Malo Energy Consulting

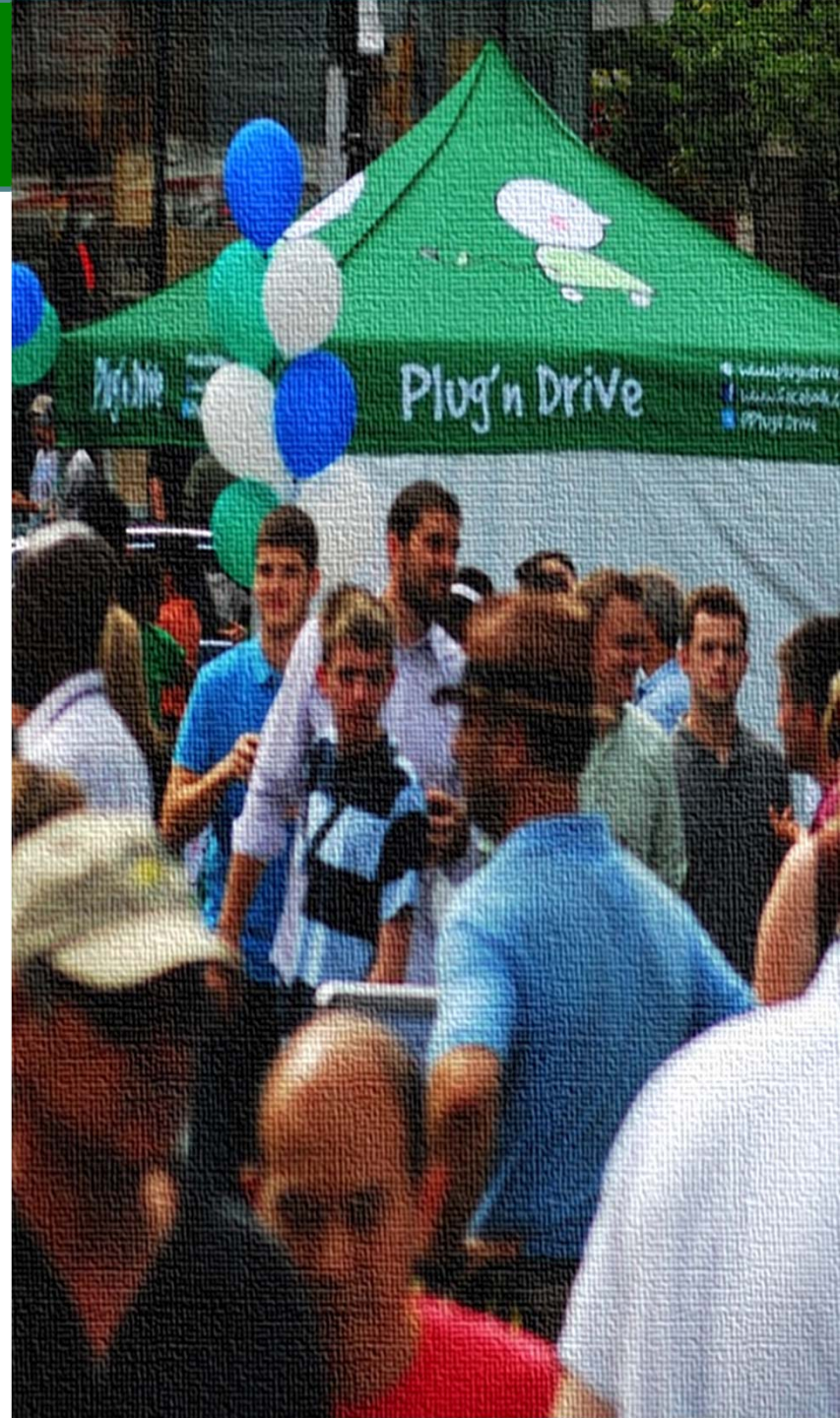
Gaetan Thomas – CEO, NB Power

Carmine Marcello – CEO, Hydro One Networks Inc.

Tom Mitchell – CEO, OPG

Gerry Smallegange – CEO, Burlington Hydro

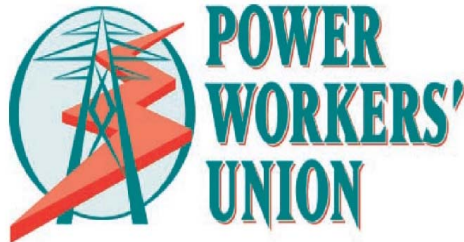
Lawrence Zimmering – CEO, AutoCapital Canada Inc.



Plug`n Drive Supporters



LEAD SPONSORS:



SUPPORTERS:



Énergie NB Power



GRANTING AGENCIES:



How We Help



Education Awareness

Home Infrastructure

Public Infrastructure



Education and Outreach



Attended: ~70 days of events

Reached: 10,000+ consumers

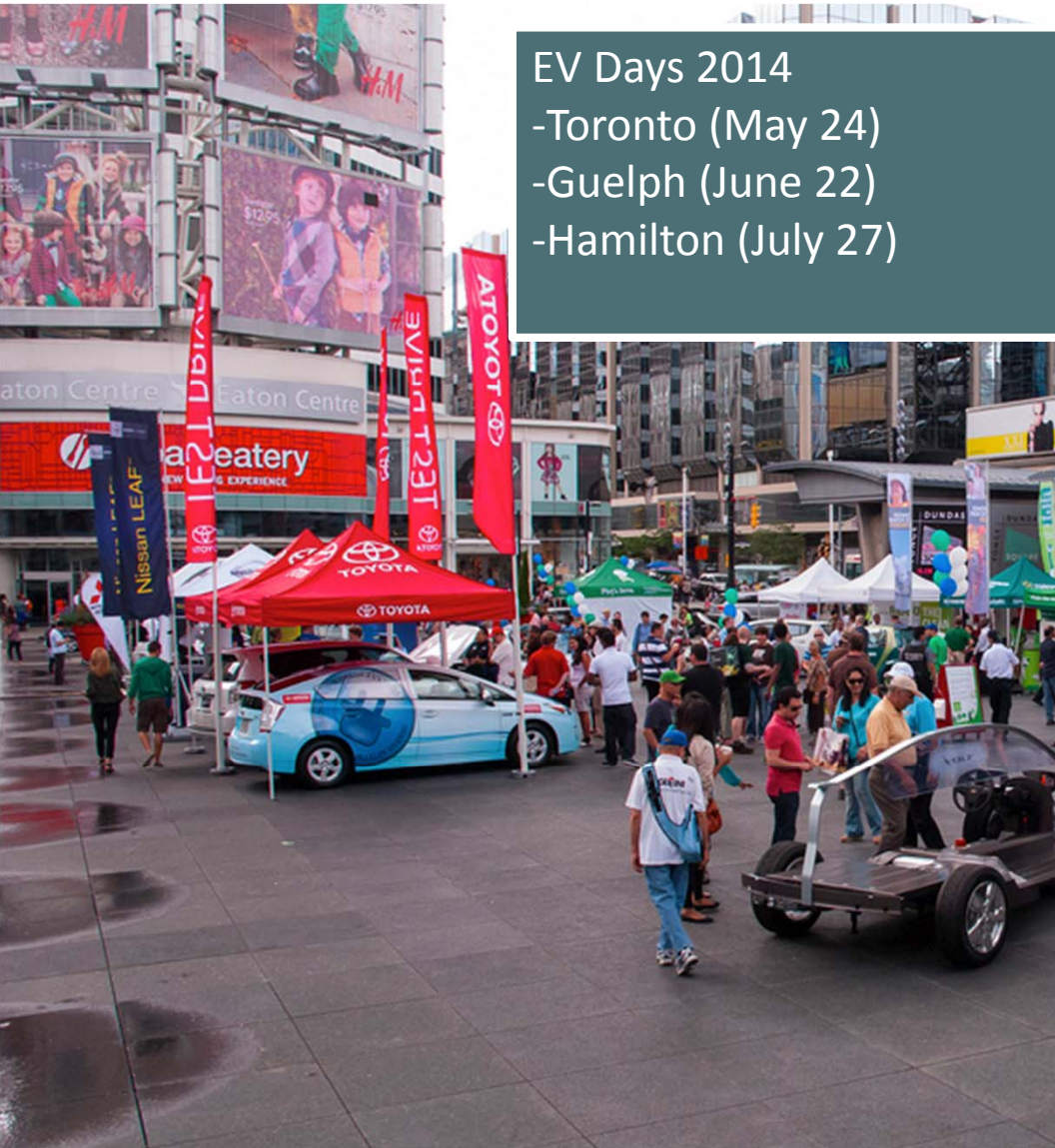
Organized: 600+ Test Drives

EV Days 2014

-Toronto (May 24)

-Guelph (June 22)

-Hamilton (July 27)

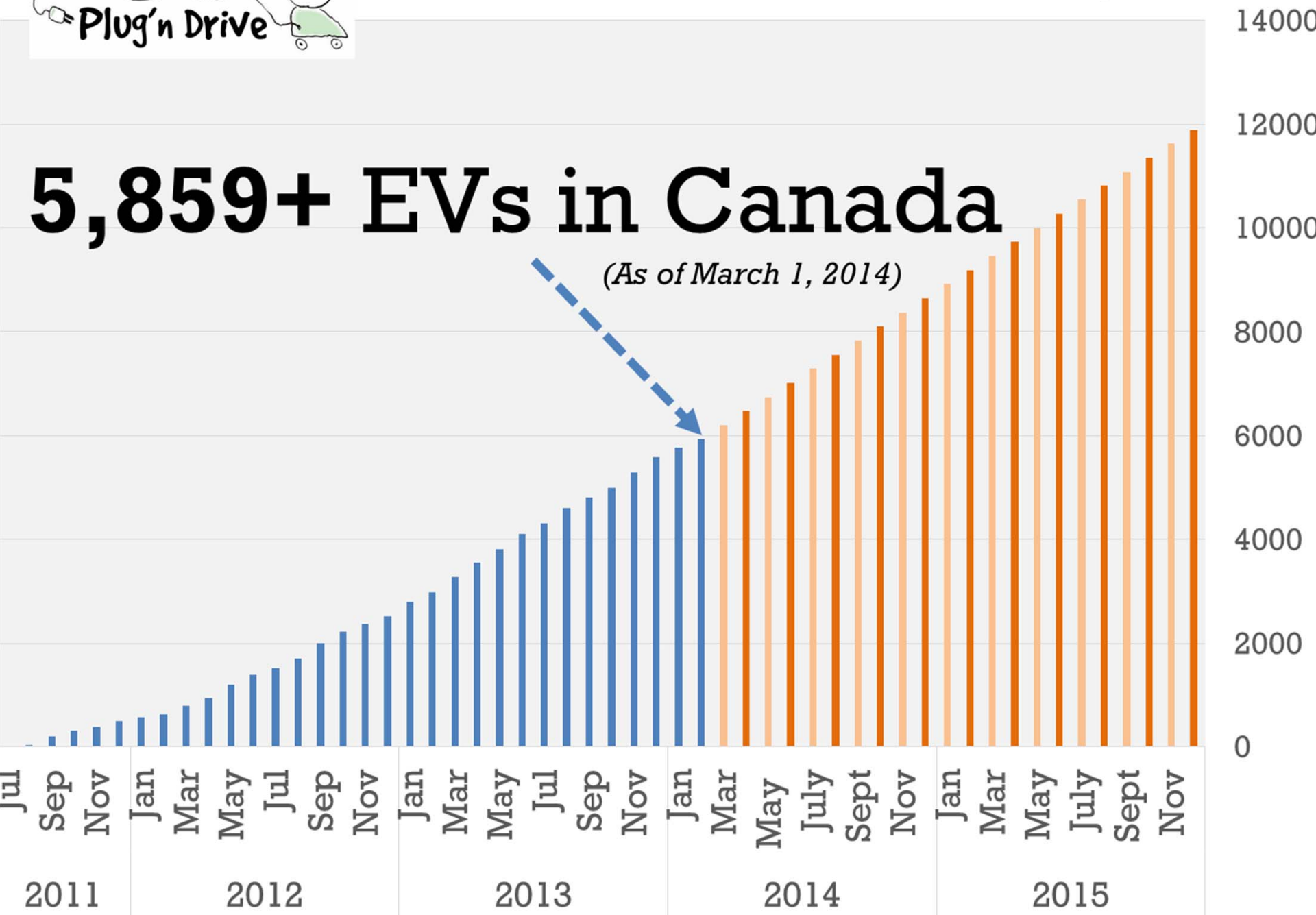




Canadian EV Penetration Historic and Projected

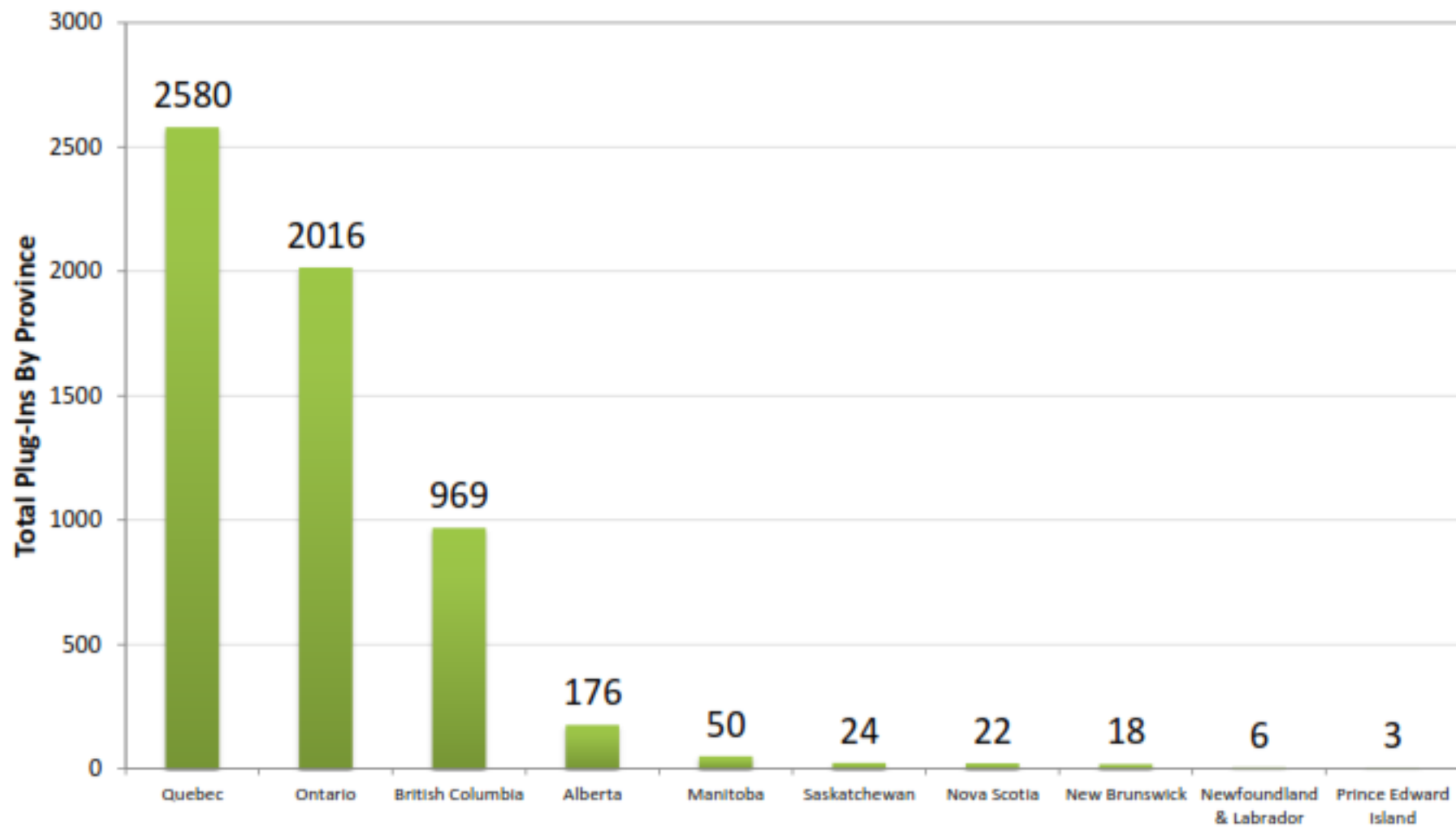
5,859+ EVs in Canada

(As of March 1, 2014)



Total Fleet By Province

As of January 31st, 2014



Which came first?

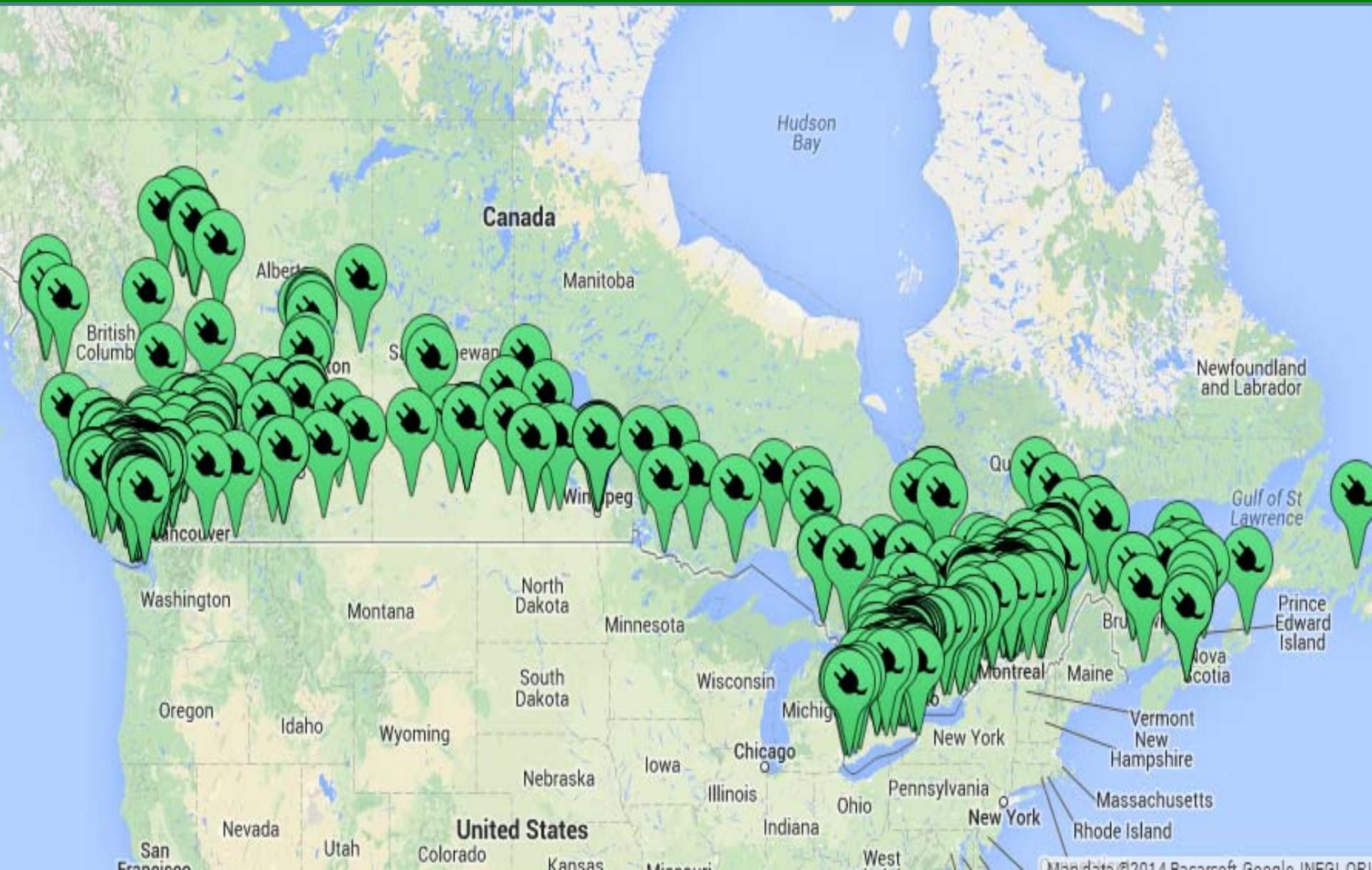


The chicken or the egg?

The charger or the car?



Mapped 2,000+ charging stations nationally



Charging



Home Infrastructure

- 80-90% of charging will happen at home
- LDCs do not know where cars + chargers are located

Public Infrastructure

- Reduces range anxiety
- Inspires adoption



charge my car

call 1-855-3-PLUGIN

a Plug'n Drive Initiative

In collaboration with:



- 1 **Choose** from Canada's largest selection of electric car chargers
- 2 **Buy** your charger securely through our online store
- 3 **Install** your charger with the help of a licensed electrical contractor



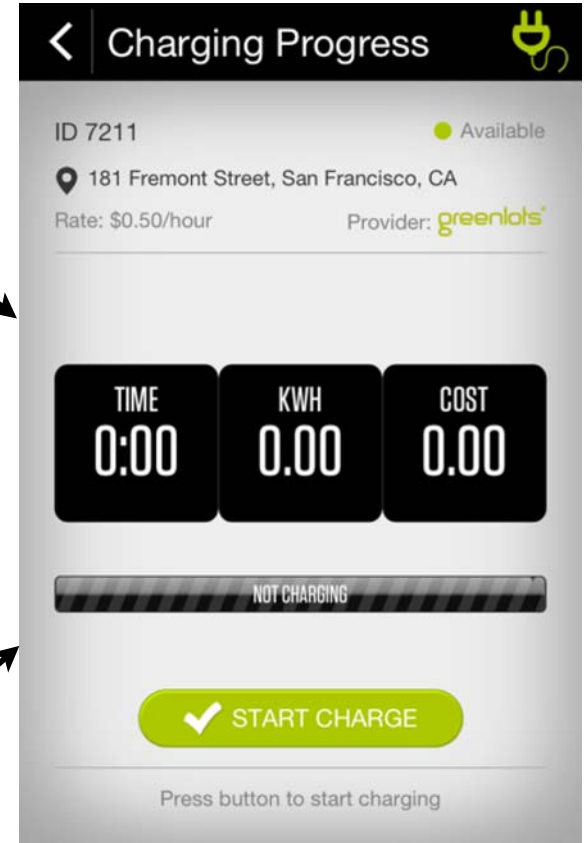
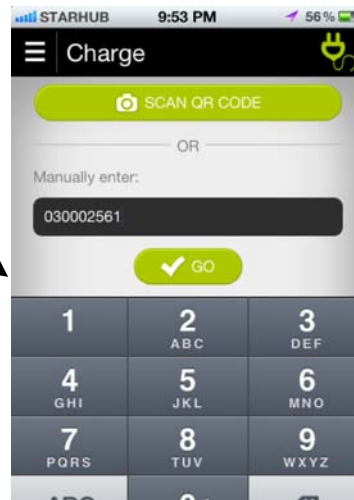
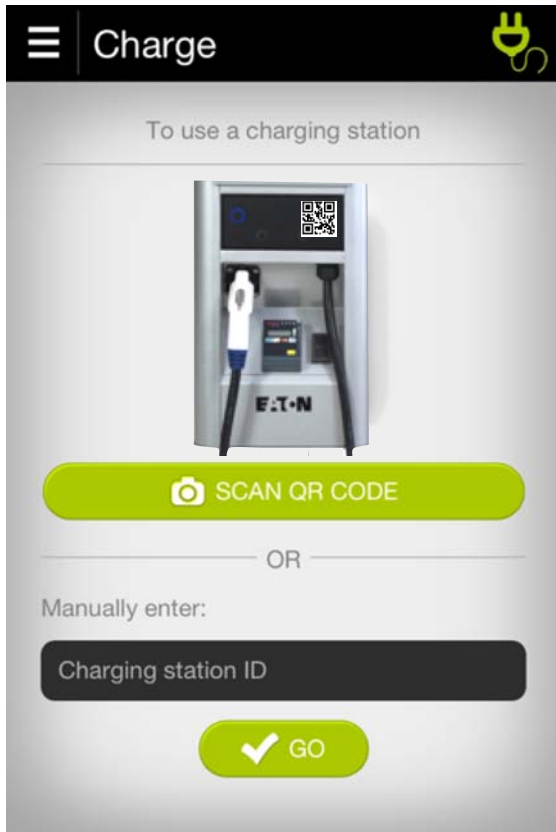
Charge My Car on the Road



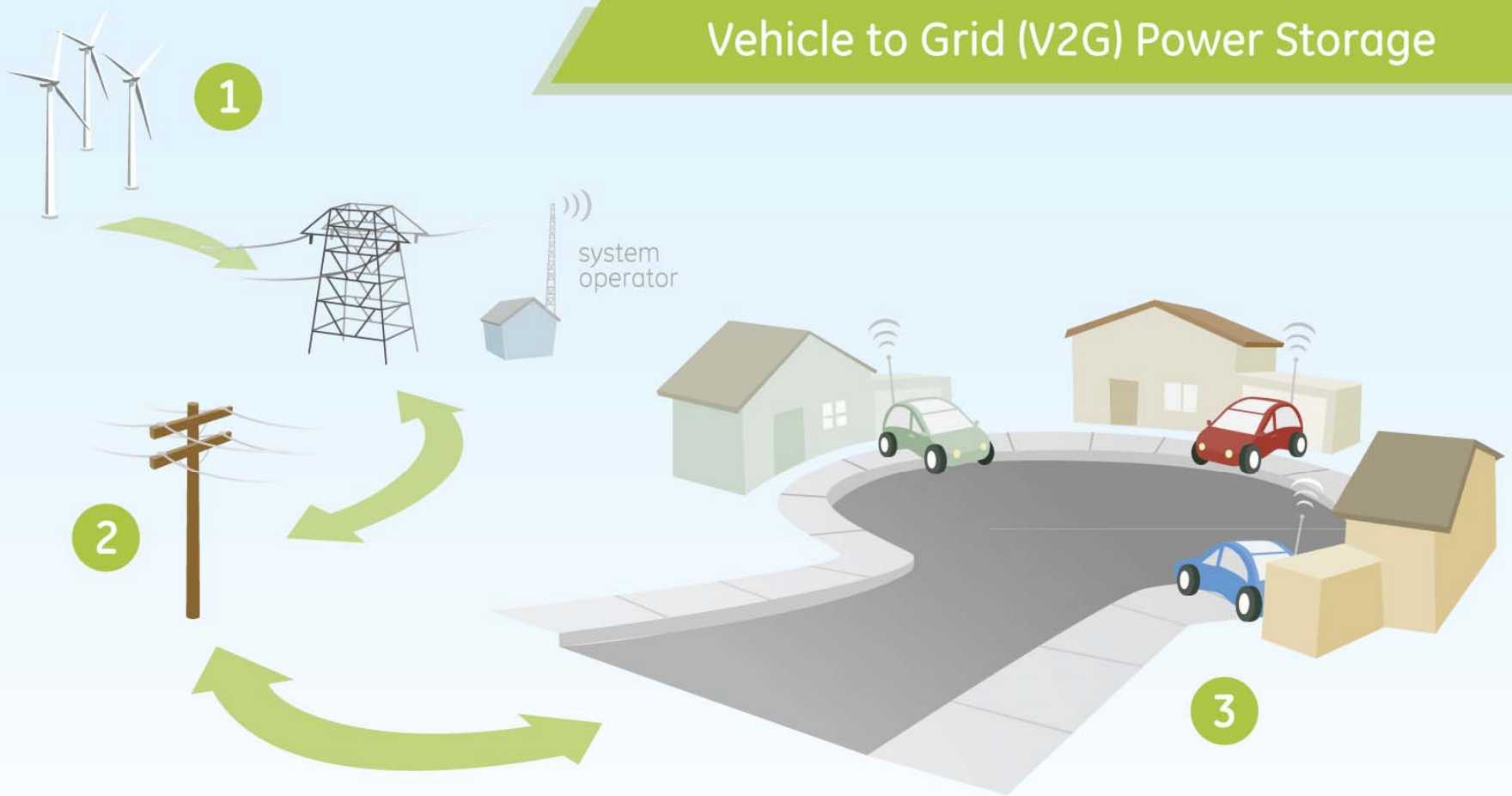
EATON greenlots

- Open source network (OCPP)
 - Will not be stranded by technology or suppliers
- Phone based:
 - Smartphone app or phone call
- Partner keeps revenue and can control the cost to charge
- Can brand charger with your company logo
- Can connect with other networks
- Best available technology

Pay with your phone



Vehicle to Grid (V2G) Power Storage



Storage Capacity of EV battery packs

	<i>Today:</i>	<i>2020</i>
Ontario	53.6 MW	364 MW
Canada	139.9 MW	952 MW

Walking the Talk!!



Thank you!

www.plugndrive.ca

@PlugN_Drive

