Greening Policies for Electric Mobility
PHEV Conference – 2007 11 01

For further information

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What is Electric Mobility Canada
A National Industry Association with 6 categories of membership:
• Industry (voting)
• Energy Providers (voting)
• End Users (Voting)
• NGO’s (Voting)
• Supporters (individuals)
• Associates (Gov’t agencies)
Currently 50 members
Our Mission

To establish electric mobility, in all its forms, as the primary solution to Canada’s growing transportation energy issues and to assist its members in the fulfillment of their mandates.
Electric Mobility is not new

Transit trips on electric modes:

- Toronto – 52%
- Montreal – 51%
- Vancouver – 49%
- Calgary – 43%
- Edmonton – 22%

Source – CUTA statistics
Potential applications are everywhere

- Private cars
- Transit
- Municipal Fleets, Utilities
- Taxis
- Local and long distance deliveries
- Marine (especially recreational)
- On site (airports, plants etc)
Drivers for Electric Mobility

- Climate Change
- Poor Air Quality
- Availability and Price of Oil
The Oil Situation – Some Facts

- In N.A., 71% of all oil is used in transport. (61% in E.U. and 58% worldwide)
- Rate of consumption 3 times the rate of discoveries.
- Nearly all transportation energy now comes from crude oil
- 4% shortfall in supply can lead to 177% increase in price.
- Alternate fuels of IC engines – not a big part of the solution
Oil Demand and Supply

The graph shows the historical and projected trends in oil demand and supply. The blue bars represent oil discovery, while the black line indicates oil consumption. The IEA forecast suggests a steady increase in demand, with projections into the future.
Canada Can Be Self Sufficient

- Renewable Electricity (hydro)
- Wind
- Solar
- Marine energy (ocean tides and currents)
- Geothermal sources
- Metal energy
- Highly urbanized – short commuter trips
World Electricity Supply by Source

- Coal 38.3%
- Gas 18.3%
- Nuclear 17.1%
- Oil 7.5%
- Hydro 16.6%
- Other 1.8%

Source: International Energy Agency
Canada’s Advantage

Canadian Electricity Supply by Source

- Hydro: 60%
- Coal: 19%
- Gas: 6%
- Nuclear: 13%
- Oil: 1%
- Other: 1%

Source: Natural Resources Canada
## The Current Situation in Canada

<table>
<thead>
<tr>
<th>Vehicles</th>
<th>Components Manufactured</th>
<th>Hybrid Vehicles Assembled</th>
<th>Electric Vehicles Assembled</th>
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</thead>
<tbody>
<tr>
<td>Power Assisted Bicycles</td>
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<tr>
<td>Battery powered bicycles</td>
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<td>Low Speed Pass Cars</td>
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<td>Regular pass cars</td>
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<td>Converted vehicles</td>
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<td>Pick up trucks</td>
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<td>Delivery vans</td>
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<td>Small Buses</td>
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<td>Large buses</td>
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<td>Light Rail Transit Cars</td>
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<td>Heavy Rail Cars</td>
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<td>Small Recreational boats</td>
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<td>Tour Boats</td>
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<td>Pleasure crafts</td>
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<td>Golf Carts</td>
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<tr>
<td>Off Road (i.e. Fork Lifts)</td>
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<td>Ice resurfacer</td>
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<td>PHEV Kits</td>
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Current EV Supportive Policies

- Various federal and provincial financial support for the acquisition of energy efficient vehicles by individuals
- Isolated support for research and product development
- Ontario announced a $15M program for commercial EV’s
Policy Projects Coming

- Canadian directory of PHEV and other electric mobility resources to be completed in a few months.
- Technology Road Map for Electric Mobility in Canada
- Electrical Code and Building Code Revisions
- Canada Space Agency
“Back to Electric” Policies Needed

- Technology and Policy Road Maps for Electric Mobility in each province and major cities
- Specific federal and provincial financial incentives for acquisition of PHEV and EV vehicles (private and commercial vehicles)
- Financial support for more electrification of transit (LRT, trolleys and subways) and electrification or some inter-city rail corridors.
- Domestic R & D Programs focused on the move to EV’s.
- Leadership through procurement policies at public agencies
More “Back to Electric” Policies Needed

- Vehicle regulatory framework that allows lighter medium speed EV’s in urban centres
- Building codes to require power outlets for EV’s in commercial and private garages
- Sections in major federal departments devoted solely to the advancement of electric mobility
- Funding for studies to examine electricity supply and demand issues relative to electric mobility.
Thank You

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